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Pocket Field Manual

By

CAPTAINS GEORGE R. GUILD
AND FREDERICK C. TEST
United States Army

A Manual Designed for the
Use of Troops in the Field

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INTRODUCTION

1. It is the desire of the authors to place in your hands a manual which contains many things which may be of assistance to you and to explain many of the problems that will probably confront you when you are en route to maneuvers or during your tour of field service.

The authors have made a close study of the subjects contained herein, they have served with the National Guard, formerly the Militia, in camps of instruction and at maneuvers and have come into close contact with a great number of regiments and special troops in different sections of the United States.

They have visited and inspected organizations in their armories and have left no stone unturned to become acquainted with the conditions which have existed in order to better understand the things which will be of assistance to you.

It is believed that if the individual officer or enlisted man will make a close study of this book and refer to it often he will find it will be a great help to him during maneuvers or other service in the field.

CHAPTER I

COMMISSIONED OFFICERS

Commissioned Officers

2. The shoulder strap is the badge that distinguishes you from your fellow men. By the very fact of your consenting to wear it, you signify to society that you accept certain obligations in return for the trust society places in you in bestowing this mark of distinction upon you.

These obligations are many and varied, no man could name them all, but the principle ones that have to do with your life habits and conduct will be mentioned.

Customs

3. For centuries military customs have been handed down from army to army and nation to nation, until by their long and continued usage, certain among them have acquired the force equal to that of Military Law. It behooves no man to violate these customs, because they are the very backbone of any military establishment. Customs that have stood the test of all the armies of all civilized nations for centuries must evidently fulfill a purpose.

Among the customs, probably the oldest and the most necessary is the custom which forbids officers and enlisted men to associate on an equal social basis *while on duty*. An officer of the regular army is always on duty, always subject to the customs of the service to which he constantly belongs, whether actually serving with troops or on leave of absence. For that reason no regular officer can enter into relations of social equality with enlisted men. This does not hold true for the National Guard or Reserve officer, because a greater part of the time this officer is not on duty; when not on duty he is strictly a civilian and should govern his social relations with his fellow man exactly as he would were he not connected with the military service of the country. When he falls into a duty status he automatically falls heir to the encumbrances of the customs of the service to which he belongs.

4. The question naturally arises, "When is the officer on duty?" and the authors' answer is, that he is on duty at all times *when he is in uniform*, or at any time when he assumes the responsibilities of his office. It is not sufficient to claim that an officer is on duty when he is actually present serving with troops, and off duty when he is returning home in a street car in *uniform*. Whenever an officer or soldier can, by his acts or conduct, bring honor to the uniform of his country, or, by his acts, disgrace it, he may well consider himself "on duty."

5. Regular troops, officers as well as enlisted men, salute officers of the regular establishment, not only because they are required to do so by law, but also because they have an inborn respect for the shoulder strap and what it signifies. If an officer desires this mark of respect he must, as a class, not as an individual, conduct himself so as to deserve it.

6. No soldier of the regular service would have the least respect for an officer who would pick his associates from among the enlisted men; no officer would have any respect for the Major General who would prefer, as his most intimate friends, the lieutenants who serve under him; no employee of a commercial firm would look, with respect, to the white-haired gentleman at the head of the firm who could scarcely find any associates except among the clerks. Why is this? Is it because each is "not as good as" the other? It is not for that reason; it is because of *custom*. We are not accustomed to seeing such things, and when we do see them they grind on our inherent conception of the fitness of things.

Therefore, while you wear the shoulder strap, pick your associates from among those who also wear them, and when you are in civilian clothes, be a civilian to your men.

7. Snobbishness is detestable in any one. You can be pleasant to your men, considerate of them, share their burdens and their hardships with them, enjoy their pleasures with them; and do all of this, figuratively speaking, just in rear of the line that runs in front of the officers' tents—an imaginary line that both you and they instinctively feel, though cannot see, as either of you approach it.

8. Another custom of the service is that of calling upon the Camp Commander. The Colonel and his staff should call on the Camp Commander not later than the third evening after arrival. The procedure is for the Adjutant to consult the

Camp Adjutant as to the time most convenient for the Camp Commander to receive this call. Side arms should be worn. Cards are not left.

Saluting

9. Officers should always salute on meeting, the junior saluting first. This salute should be made in a graceful and easy manner, and should be accompanied, in all cases, by some verbal greeting, except in the case of an officer delivering or receiving an order or a message from his superior. It is not essential that officers should be acquainted with one another to salute and speak when they meet or pass; they should always do so, irrespective of their relative rank or the organization to which each belongs.

Knowledge of Duties

10. When an officer accepts his commission, he assumes a grave responsibility, and he admits that he believes himself competent to fill the position he occupies and to execute the duties thereof. The occasion may arise at any time where the lives of the officers and men under him depend upon his capability, forethought and good judgment.

For this reason, an officer should study the military profession. He should learn the "little things" about a soldier's life making a study of the messing of his men, the sanitation of his camp, the care of his animals, arms and equipments. It is the knowledge of these apparently small things that makes him a good officer and after learning these he can devote his time to the larger subjects contained in the military profession.

Errors to be Avoided

11. 1. The selection of commissary supplies should not be left to the issuing supply sergeant.
2. Great care should be taken with the sanitation of your camp, do not neglect this, as the health of your command depends upon the precautions taken.
 - a. Men should be required to use the rears provided and not allowed to go to the most convenient place. Rears should be located as conveniently as possible, due regard being had to the health of the command.
 - b. Kitchen refuse should not be allowed to fall to the ground where it will attract flies.

- c. Cooks should be required to be absolutely clean; food should be served in a sanitary location and should not be "messy."
 - d. Great care should be taken that the men wash their mess kits properly and that they are not put away in a dirty condition.
 - e. Facilities should be provided for the men to wash their clothes; this will prevent men from appearing in a dirty condition. The place where clothing is washed should be kept sanitary.
3. Animals should be fed and watered regularly and properly, bridles, saddles and harness should be properly fitted; animals should be properly groomed; they should not be left saddled and bridled unless someone is going to use them; they should not be ridden at a gallop when a walk or trot will do just as well.
4. Men should be required to take proper care of their arms and equipment. Arms should be inspected once each day when in camp or in field.

12. Great care should be exercised that wagons or trucks are properly loaded and that they are not overloaded. Wagon or truck trains should be properly conducted on the march. An officer should always be on duty with them.

13. There should always be a system prevailing in camp and duties should be done by those supposed to do them. Details should be as small as possible but large enough to do the work prescribed. Do not allow men not detailed to do the work laid out for these details.

Officers should supervise the work of establishing camp and should see that it is done quickly and properly. Everything should be done as quietly and as quickly as possible. Each company officer should have some particular work outlined for him to do and should see that it is done properly. The company commander should oversee the work of his command.

14. Officers *must* know what to do; if an officer does not know, who is going to? How can men be commanded, instructed, and cared for if the officers do not know their business?—the "little things" not the big ones?

15. The supply officer should see that the property is kept down to the actual necessities. The allowance for a regiment is twelve wagon loads, this includes tentage and supplies.

16. Expensive and elaborate mess outfits should never be taken into the field for the officers. It is believed that the best results will be obtained if the company officers eat the food served their companies, but they should not eat with their men.

17. Of course it is realized that, for many men, the period spent in the field is their vacation and, in many respects sort of an outing—all well and good, a great deal of enjoyment can be had; but one thing must never be forgotten, you are a member of the force that may some day defend your country and it is vitally necessary that you should do all in your power to become an efficient officer.

The Uniform

18. Officers should strive to be in prescribed uniform at all times. If one expects to attend social functions in a neighboring town a neat, clean, field uniform is far more appropriate and more soldierly than a dress or white uniform when one is on field duty.

What Constitutes a Good Officer

19. The prime requisite for a good officer is that he shall be well disciplined. By this is meant a ready and cheerful willingness on his part to obey the orders of his superiors without question and in the spirit in which these orders are given; likewise to so conduct himself that he can obtain these results from his subordinates. An officer may be ever so efficient, yet if his superiors cannot rely upon him to obey orders he is of no value to the military service.

20. A line officer must be able to command men. Some officers know how to do this instinctively and manage to win the love, respect, and confidence of their men without any effort to do so. Other officers antagonize all their subordinates, and their orders are obeyed grudgingly. How to obtain the results is a difficult thing to explain, but those who do not have the faculty naturally may acquire it if they can ever realize their faults. Subordinates are human, they have their feelings like you and I, they have pride that can be hurt, or pride that can be appealed to. They will do twice as much work twice as well if they do it willingly rather than grudgingly. The American soldier, as a class, cannot be *driven*; but if properly *led*, no soldier in the world will produce superior results. The tone of

voice, the mannerism, the soldierly deportment and demeanor of an officer count for a great deal in obtaining cheerful obedience from subordinates. If an officer, who is every inch a soldier, quietly says, "Sergeant, I wish you would take a detail of men and have this street properly policed" he will have his order more promptly and cheerfully obeyed than another officer who slouches down the company street and bawls out, "Sergeant, get a detail and clean this street." Either officer would be obeyed, but the *spirit* of obedience would be obeyed would be different.

The expressions, "I wish you would, I would like to have you" etc., usually are better than "Go do so and so." When a sharp command is needed it should be given, but when not needed it should be avoided. Speak to your non-commissioned officers as you desire to be spoken to by your superiors. Many an order can be given in such a manner that the one receiving it hardly knows that he has been *ordered* to do anything, and obeys in perfect good will. Care must be taken not to go to the other extreme, and orders be given in a weak and undetermined manner. An unnecessary order should never be given, but if once an order is given the one giving it must follow it up at all costs and see that it is obeyed, or else countermand it.

21. Every officer should know his own duties and the duties of all of his subordinates, otherwise he can neither give orders understandingly nor appreciate the qualities of an efficient subordinate. When first commissioned he should endeavor to learn all there is to learn, not only of the duties incident to his own rank but those incident to his immediate superiors and his subordinates. If an officer wishes to succeed he should learn all he can about the military profession as a whole, and there is so much to learn that he need never fear that he will acquire it all.

22. An officer should ever be an example to his men. He should be neat about his personal appearance, clean in his language, and soldierly in his deportment. He should be considerate of his men, but should not be familiar with them *while on duty*; "familiarity breeds contempt" applies very forcibly in the military service. When he has occasion to go among his men, even in camp, he should do so in full uniform and with his blouse buttoned. It is rarely deemed advisable for an officer to remove his coat and pitch in and help his men with some

work they may be doing; if this ever becomes *necessary* do not hesitate to do it, but be sure of the necessity existing.

23. A good officer need never swear at his men—it only proves him to be a poor disciplinarian. When things are going wrong and every one else loses his head then is the time for the officer to retain his own self-possession and remain cool. If you do not like to be sworn at do not swear at those under you. Coolness is a cardinal virtue of an officer, and profanity toward an enlisted man only shows that an officer has lost his self-control. Moreover, it is a grave injustice to swear at anyone whose subordinate military rank forbids him to resent the language, and the soldier who calmly endures a volley of profanity directed at him, and who, realizing his discipline as a soldier, refrains from a reply, is a far better soldier than he who is giving abuse—and more of a gentleman, too.

Conduct While in Uniform

24. An officer in uniform is conspicuous wherever he goes, and in whatever he does; therefore he should be careful of his acts and conduct while in uniform. It is only because officers of the regular service are exceedingly careful of their conduct when in the vicinity of enlisted men that they retain the respect of their men.

25. It should be remembered that civilians are prone to comment on every little violation of the peace of the community when committed by those wearing the uniform of the country; nor can they be blamed for doing so. The uniform is intended to be respected, and it will be as long as the individual who wears it conducts himself properly.

26. When your organization is doing duty officers are advised to bear in mind the following “don’t’s”:

Don’t frequent barrooms usually frequented by enlisted men;—go to a hotel.

Don’t appear in *uniform* on the streets or in public places with the men of your organization.

Don’t wear mixed uniform, adhere strictly to the regulations; mixed uniforms furnish a source of quiet amusement for the regular soldiers.

Don’t wear your coat unbuttoned out of camp; nor flowers on your coat; nor your hat on the side of your head. All of these things are unsoldierly and detract from your bearing as a soldier.

Reference Notebook

27. Every officer should have a small pocket notebook in which he should jot down any stray bit of valuable information that may come to his notice, in view of the fact that it may come in very useful to him at some future date. If an officer keep his eyes open for *pointers* he is sure to find many of them;—they should go into the book.

Acquiring Information from U. S. Troops

28. Use the time in the field to acquire all the information possible from U. S. troops serving with or near you. Notice their camp, how they prepare their food, how the animals are cared for, how arms and equipments are cared for;—in fact, use your eyes.

Do not hesitate to visit regular officers of your own rank, or those of junior rank. Ask them any questions you desire, for they are always glad to help you. If you have the time and opportunity to do so, go with regular officers when they attend some of their duties. Do not feel that you are intruding, for you are not. Any regular officer will be glad to have you go with him and will go out of his way to teach you what you wish to learn, if he sees that you are in earnest. Go to him, introduce yourself, tell him what you would like to know, and you will find that you have gained a new friend. Then ask him to come to your camp and criticise the faults of your organization.

29. If you reside near an army post and can spare the time you would receive a great deal of information if you would request permission from the commanding officer of the troops to accompany them on one of their short trips in the field. Such permission will usually be granted, and the officer will enjoy the trip and derive a great deal of good from it.

What to Take into the Field

30. Unless otherwise ordered, an officer's camp equipage (for permanent camp) usually consists of a field box and a bedding roll, weight not over 150 lbs. For short camps the field box is usual omitted, and it is believed that it would only be an incumbrance to line officers. A good servicable bedding roll will be found to be a great luxury, if much camping is to be done. It is a part of your prescribed equipment.

31. If an officer cannot afford an expensive bedding roll a piece of canvas about 7 feet square will be found to answer the purpose. A Gold Medal cot should be rolled inside the bed roll.

32. The field box, to conform to regulations, should be 32 inches by 19 inches by 13 inches over all, the handles to be of rope or leather, hinges and locks to lie flat, so as not to interfere with other articles when loaded on the wagon or truck. The box, when packed must not exceed 100 lbs. in weight.

33. The bedding roll, when rolled should not exceed 39 inches by 21 inches, nor weigh more than 50 lbs.

34. If only the strict allowance is permitted then take no field box nor cot and limit the weight of the bed roll to 50 lbs.

35. It would be advisable to take a small medicine case filled with the ordinary remedies.

Some Simple Rules for the Field

36. Don't come to maneuvers in new shoes, or low ones. Be careful of the water you drink.

Don't throw food on the ground to attract flies.

Use the rears, not the ground, and cover the deposit.

On the march, don't drink from your canteen until after the *second halt*, nor eat food except at mess.

Don't eat salty food before a long march.

Don't put milk or beer in your canteen.

Keep your bowels open.

Don't wear dirty clothes, look neat.

Bathe every day, if possible.

On the march, bathe the feet in cold water at the end of the march. Opinion differs as to the use of soap; the authors believe its use to be beneficial and not harmful to the feet.

CHAPTER II

ENLISTED MEN

Why You Should be Soldiers

37. The policy of the United States has always been against large bodies of trained troops and a large standing army. Due to luck, inferior enemies, or enemies who were themselves engaged in other wars, the United States has come out successful in all its past wars. The United States has never met a world power that was free to devote its entire forces to the task of defeating our own. The present war in Europe and the revolutions in Mexico and the raids on our border have awakened the people to the necessity of having trained men.

Many people still have the opinion that we never can be defeated, others maintain that a million men will offer their services in a day. It stands to reason that the men must be trained men to be able to withstand the modern engines of destruction in the hands of those skilled in their uses, courage and patriotism alone will avail nothing, there must be other factors, namely—Discipline and Training.

38. Discipline might be defined as “the ready and cheerful willingness on the part of the soldier to obey an order without question,—to do what he does not want to do, and do it gladly.” This, being contrary to human nature, can usually be acquired only by years of military training under rigid disciplinarians, unless the individual recognizes the necessity for discipline and coöperates with those attempting to instill it into him.

39. Other things being equal, an undisciplined army will suffer defeat when confronted by a disciplined one of equal or even inferior numbers. In a future war the safety of the nation will depend upon the discipline of each Regular, National Guard, and Reserve soldier, and this discipline should be learned now.

40. The United States is supplying the training to all who desire to enlist in any part of the military service. Discipline

must be supplied by whom? Among regular troops discipline is seldom a matter causing trouble because the recruit gradually absorbs it from his associates who are themselves disciplined, but when necessary Military Law is used to enforce it.

To be a disciplined soldier all that is needed is obedience when you feel that you want to disobey, do what you do not want to do and do it willingly, on account of your pride in being a soldier. It is not a hard thing to do when you make up your mind to do it, and you will have the satisfaction of knowing that you are a soldier.

Association With Officers

41. You have often heard the saying "familiarity breeds contempt." No saying more aptly fits the relationship between officers and men. It is not because the officer is any better than you are; if you are an honorable and honest man, no man can be better than you are; nor because you concede to him any superior social status, for socially, he might be your inferior; but there is a vast difference between social superiority and military superiority. Any man is your military superior who is senior to you in rank, be his social status whatsoever it may, and it is your duty as a soldier to obey his lawful orders without question.

When on duty do not fraternize with your officers, stay away from them. Your officers, if properly disciplined, will keep away from you. This will promote discipline in your organization.

Courtesy

42. SALUTING: Why are soldiers required to salute officers, do you know? It is simply for the reason that, as officers are not supposed to be around their men except when on duty, it is necessary for the men to recognize the presence of an officer when on duty in order that the officer need not use a megaphone to make himself heard if he has any orders to give. That it may not be left to the discretion of each individual soldier to decide for himself whether a "duty" status exists or not, all soldiers are required to salute all officers at all times—then there can be no error about it.

Courtesy and respect among gentlemen has made this salute a custom to be adhered to among military men whenever officer meets officer, or officer meets enlisted man.

There is nothing in the salute that is degrading, it is a graceful acknowledgment of the presence of one of your own select profession. If you should ever think otherwise just remember that the very person whom you salute must salute his own superiors—then it may ease your conscience.

ATTENTION:—When soldiers are not in ranks, are in a group, and an officer approaches, the word “attention” is called by the first soldier to perceive his presence. The salute may or may not follow, depending on circumstances. This command “attention” is made necessary for the identical reasons given for the necessity for saluting. If the word “attention” only were required it would fit some occasions and not others. For example, a soldier meeting an officer would hardly call out “attention” to himself, yet there must be some assurance that he will recognize the presence of an officer—hence the salute in this instance. If an officer has occasion to approach a group of men, and if the salute alone were required, a few men would be liable to see him and a few awkward moments would intervene before he could get the attention of the whole group—hence the word “attention” to make all aware of his presence at the same time.

Abbreviating the Titles of Officers

43. Enlisted men should never abbreviate the titles of their officers by referring to their Captain as “Cap” and their Lieutenant as “Lieut.” To do so only shows a familiarity that should not exist. Officers should be addressed by their full titles.

Simple Rules for the Field

44. Keep your bowels open.

Use the rears and cover the deposits.

Bathe as frequently as possible; at least wash your feet each evening.

During marches, use a clean pair of light wool socks each day.

When sick, report to the first sergeant at sick call, or when necessary.

Keep your clothes clean and wash them.

Do not spend all of your money on refreshments.

Do not throw refuse on the ground.

Wash your mess kits in hot soapy water, rinse them in hot clear water, dry them with a drying rag and put them in your haversack.

Fill your canteen before a march.

Do not drink from your canteen until you have been marching two hours.

Keep rifles and pistols clean, free from rust, and well oiled.

Air your bedding every day, if possible.

Do not drink water from wells and streams on the march, unless you are sure it is safe to do so. A well close to an out-house should be avoided.

Do not pollute streams, or the edge of streams; other troops or animals may need the water.

Do not smoke at or near a picket line, forage pile, or near stock cars.

CHAPTER III

DUTIES OF OFFICERS (Field and Staff)

The Colonel

45. The Colonel is the father of his regiment. Upon his knowledge depend in time of peace, the discipline, health, and contentment of his men; in time of war, their lives.

46. He should be an able and experienced soldier, since on assuming command of a regiment he also assumes a very grave responsibility as to his fitness to command it.

47. He should be able to picture himself in the position of those occupying subordinate grades under his command. He should understand their hardships and constantly work to lessen their load and at the same time maintain discipline.

48. He should, while on duty, associate only with his field officers if he wishes to maintain discipline.

49. He should carefully select his staff and solely for the individual ability of each of the officers, then he should give them his entire confidence. A good staff is necessary for the efficiency of a regiment.

50. Before going into the field he should carefully study the War Department orders relative thereto and prepare his own orders in accordance therewith.

51. He should take particular care to see that each company is supplied with the proper rations to include the entire day of its arrival in camp, and as promptly as possible after arrival in camp he should issue the necessary orders for the issue of further rations.

52. In issuing orders he should make them as brief as possible consistent with clearness, and should see that they are obeyed.

53. He should see that the members of the supply company report to the commander not later than their arrival at camp.

54. The Regimental Field and Staff Officers should mess together.

55. The Regimental Field and Staff Officers should each be allowed a bedding roll and a field chest (of regulation size) but all other officers should be limited to a bedding roll which,

with gold medal cot rolled inside, should not ordinarily exceed 50 pounds in weight. The above applies to a short camp.

56. Very often the companies do not bring the necessary blank forms to camp. The Colonel should take the necessary steps in advance to ensure their doing so. The blank forms are:

Muster and pay rolls.

Field returns.

Ration returns.

Fuel and forage requisitions.

Morning reports.

Duty rosters.

Sick reports.

Memorandum receipt blanks.

Correspondence book and file.

All orders affecting the composition of the company, the status of the members, etc., which would in any way affect the pay of any member of the organization; retained muster roll; records of dates of enlistment, appointment, or promotion of any member of the company.

57. He should, if practicable, cause one copy of the muster and pay rolls of each organization to be completed before arrival. He should detail an officer, preferably the Lieutenant Colonel, to take charge of the preparation of the rolls. The required number of rolls should be turned over to this officer and errors corrected by him before being submitted for payment.

58. If it is known for how many days the troops are to be rationed on arrival, the ration returns of all organizations should be made out en route and submitted to the Adjutant upon arrival. The same is true of fuel and forage requisitions. The adjutant transmits these papers to the proper supply officer.

59. The Colonel should telegraph the Commanding Officer of the camp or command a couple of hours before the arrival of his regiment, giving as nearly as possible the exact hour of arrival. In case no officer meets the regiment the Colonel should cause the Commanding officer to be notified at once of its arrival, this can usually be done by telephone.

60. Before marching to camp the unloading details should be dropped out of each company and left at the train. These details should be informed to whom they are to report for duty.

61. On arrival at camp and the camp site having been designated, the Colonel should quickly decide on how the camp is to be laid out and proceed to get the camp pitched with dispatch. He should halt the regiment just as it comes on the camp site, looking the ground over *quickly*, decide on the line of company tents, headquarters tents, kitchens, picket lines, rears, etc., then return to the regiment and issue instructions as to the points just decided upon, put the regiment in march, form column of companies at proper intervals and pitch camp at once.

62. The Colonel should by this time have been informed, by one of the officers of the supply company, as to the location of water for drinking, cooking, and bathing purposes and for watering animals; how to get fuel and where; also as to the method of disposing of kitchen refuse and stable manure. He should at once cause his Adjutant to personally notify each company commander of these facts.

63. The companies should each furnish a detail of one private to report to the Regimental Sergeant Major as soon as pitching of camp begins for the purpose of pitching the headquarters tents and unloading headquarters property.

64. The Colonel is particularly advised to rigidly enforce the order that latrines shall be prepared at once and that latrine screens shall be put up. He should see that this is not delayed until everything else has been attended to.

65. The companies should be given about two hours to get settled then the Colonel, accompanied by the Lieutenant Colonel and Adjutant (and each Major in his own battalion) should make an inspection of the camp. Corrections should be made to the proper officers when necessary.

66. The companies should fall in under arms at retreat each evening and the arms should be carefully inspected by the company commanders.

67. The Colonel should appoint the senior attached medical officer Sanitary Inspector of the regiment and require him to make a sanitary inspection of the camp each morning. He should be required to make a detailed report in writing each day. If there is no medical officer attached this duty might be not improperly imposed on the Lieutenant Colonel.

68. The Colonel should make a careful inspection of his entire camp once each day at as nearly a fixed hour as possible, preferably before noon. It would be well for him to be accom-

panied by the Lieutenant Colonel, Medical Officer, and Adjutant. The sanitary inspection might be made at this time. At this morning inspection the Colonel should give special attention to the following: that the company streets are clean and properly drained; that tents are properly ditched; that tent walls are habitually rolled up and bedding aired on days which permit this to be done; that the kitchen refuse is disposed of in the proper manner; that if incinerators are used a good fire is kept burning in them at all times; that rations are kept in the proper manner; that latrines are screened from view and properly cared for; that picket lines are properly cared for and manure disposed of in the proper manner; that animals are in good condition and showing no evidence of sore backs, shoes off, want of grooming, etc.; that animals are tied so as to be able to lie down; that the stable sergeants know how much to feed and when, where to water and how often; that a stable guard is maintained; that the forage is protected from rain and mud; that wagon transportation, if any, is in good condition and harness clean; that saddle equipment, horse blankets, etc., are properly kept.

69. The Colonel should have a guard established and should see that it is as small as is consistent with efficiency and the proper protection of property—one or two posts will usually be sufficient. He should see that the guard is quartered separately during its tour in a tent provided for that purpose.

70. If there is no list of calls he should cause one to be prepared for his regiment at once, conforming to the calls or hours of formations that are prescribed by camp headquarters—probably reveille, retreat, and taps, at least. In some maneuver camps the blowing of calls is forbidden, in such cases the Colonel must use his own ingenuity in getting his men to attend formations promptly. The use of the 4 foot signal flags as a signal is suggested; this would be used as a ten minute warning previous to the formation, being hoisted where it can be seen. In any case the regiment should conform to the requirements of the camp. The Colonel should see that only one musician sounds the calls in his regiment.

71. He should cause all officers to assemble at headquarters tent each evening at a designated hour and should issue his instructions verbally, requiring officers affected by them to make notes. The hour for this assembly should, when practicable, be selected so as not to deprive officers of their evenings.

72. The Colonel should call, with his staff, on the Camp Commander at his earliest convenience. The best hour in camp is about 7 P. M. The call should be a brief one. It would be well for the Regimental Adjutant to ascertain from the Camp Adjutant what hour would be most convenient for this call to be made. The band could be sent to camp headquarters to give a concert during the call of the regimental officers.

73. The Colonel is advised to be familiar with the remarks contained herein concerning his subordinates.

- Lieutenant Colonel

74. The Lieutenant Colonel should, in the absence of the Colonel, follow out the methods and wishes of the latter to the best of his ability unless the Colonel is absent permanently.

75. He should have charge of the preparation of the pay rolls of the command. The copies made enroute should be submitted to him upon arrival of organizations at camp and he should see that errors are corrected; these copies are turned over to him by the adjutant. The rolls should, after being corrected, be returned to organization commanders and they should be required to have the necessary number prepared; when these have been prepared they should again be submitted to this officer and should be verified by him, errors corrected and when the rolls are correct they should be submitted to the Adjutant.

The Lieutenant Colonel should study the instructions for making out pay rolls and should be familiar with all decisions relative to their preparation. He should be an authority on all matters pertaining to the pay of troops.

76. He may be assigned to such duties as are not inconsistent with his rank, such as Summary Court, Survey Officer, Sanitary Inspector in the absence of a Medical Officer, etc. He should be familiar with the duties of the colonel of the regiment, and he is advised to familiarize himself with the remarks given herein under the heading "The Colonel."

The Major

77. The remarks given under the heading "The Colonel" apply equally well to a Major whose battalion is serving alone in the field. It is suggested that he read those remarks carefully and also those under the heading "The Captain."

78. The Major should be in close touch with the companies of his battalion and should see that they comply with the orders issued by higher headquarters. He should see that when he issues an order to a company it is complied with. He should see that the companies of his battalion are adequately sheltered and rationed. The only way for him to find this out is to go among the companies and observe how they are being cared for.

79. While he should exercise supervision over his entire battalion he should not do so in such a manner as to deprive the company commanders of their initiative. He should cause faults to be corrected, but should not attempt to require all company commanders to follow the same methods to arrive at a desired end. He should devote his attention where it is needed; an experienced company commander should be allowed more latitude as to judgment than a weak and inexperienced one. In dealing with the latter he should instruct and correct by encouragement and not in a fault-finding manner. A little tact sometimes will work wonders.

80. He should make it his duty to see that the latrines are installed *at once* on arrival in camp, and that they are properly screened; that the camp sanitation is rigidly enforced; that animals are properly cared for.

81. He should make an inspection of the camp of his battalion each morning and should see that errors are corrected before the inspection of the regimental commander. He should accompany the regimental commander during the latter's tour of inspection of the companies of his battalion.

82. He should see that all of the companies of his battalion provide the necessary means for washing clothes. He should require the company commanders of his battalion to have their men keep neat and clean at all times. He should see that they have the proper bathing facilities and that the men make use of them. If facilities for bathing are limited he should set aside a designated time for each company to bathe.

83. He should give his attention to the condition of the arms and equipment in the hands of the enlisted men of his companies and should see that his company commanders have provided a liberal supply of oil and cleaning material. He should see that his company commanders inspect the rifles and equipment of the men of their companies at the time designated.

84. He should endeavor to ensure good company messes in his companies and to this end he should inspect the meals of the various companies at such times as he deems proper. He should see that the meals are inspected by a company officer.

85. He should see that his companies turn out promptly for formations and that they are dismissed promptly at recall. He should make it a point to be up at reveille and see that the companies are promptly and properly formed and that the reports required are made promptly.

86. All papers and reports concerning any members of his battalion that are to be forwarded to headquarters should pass through his hands and should be initialed by him before being sent to headquarters.

The Adjutant

87. The regimental Adjutant is, or should be, about the busiest officer of the regiment. He should be bright, tactful, and pleasant to all with whom he comes in contact.

88. He is the commanding officer of the headquarters company and consequently is an organization commander. The band and noncommissioned staff are part of this company.

89. His principal duty is to *know things*; he must know what others do not. He must be conversant with all War Department, camp, and regimental orders affecting the regiment. He must be willing to answer questions all day long and be able to answer them correctly. He must be familiar with army paper work; in fact he should be an authority on this subject in his regiment.

90. He should be familiar with Army Regulations and the contents of all the staff manuals, in order that he may know at once where to find information pertaining to any subject under discussion.

91. In camp he should know where other organizations are encamped; from whom the regiment gets supplies, how and on what days; for how many days troops are to be rationed and what kind of rations are to be drawn.

92. He should know what is expected of the regiment in regard to field exercises from day to day. This information is transmitted to him either in written orders or verbal instructions each day. He should keep the companies informed as to what is expected of them each day.

93. He should see that all papers that pass through his hands are correctly made out. This applies particularly to morning reports, ration returns, field returns and pay rolls.

94. In regiments in which the companies are together only at encampments the Adjutant should endeavor to have the officers become acquainted and to associate with one another.

95. He should endeavor to systematize duties in the regiment. He may often have an opportunity to learn some valuable pointers from some of the particularly efficient company commanders and in a tactful manner gradually get the other company commanders to perform their duties in a similar manner.

96. He should cause the Guard Roster to be properly kept and should see that the detail is posted on the bulletin board daily before First Sergeant's call.

97. He should cause the Sergeant Major to keep the Consolidated Morning Report properly (Form 336, A. G. O.) and should check it each morning before placing it before the Colonel for his signature.

98. He should have the following blank forms and supplies in his field desk:

Ink	Duty Roster
Pens	Ration Returns
Pencils	Field Returns.
Pen-holders	Muster and Pay Rolls
Blotters	Army Regulations
Stamps	Drill Regulations
Letter Paper (regulation size)	Field Service Regulations
War Department orders or circulars that affect any part of the regiment	Manual of Interior Guard Duty
Necessary blank forms	Correspondence Book and file
Consolidated Morning Report	Guard Report

The field desk should also contain a list of contents. This list should be kept up to date so as to be more and more complete for future field service.

99. He should have envelopes for each of the following officers: Lieutenant Colonel; each Major; Regimental Supply

Officer; the Sanitary Inspector; each Company Commander. These envelopes should be marked "Major 1st Battalion," "Commanding Officer (Co. A)," etc. and not with the officer's name. In these envelopes may be placed all the business that applies to that particular officer. These envelopes are given to the orderly to be delivered by him to the proper officer, the envelopes are to be returned to the Adjutant by the orderly. All orders sent out in this way should be entered in a blank book after the officer's name and he should be required to sign his name acknowledging receipt—or on the envelope as is most convenient.

100. The Adjutant should have a bulletin board erected at headquarters on which all orders, memoranda and details affecting the command should be posted before First Sergeant's Call each day. This board should have a list of the officers of the regiment posted on it each day with a place for their signature after the name. Officers should be required to read the orders on bulletin board and sign the list acknowledging that they have done so. Usually the limit set for "Signing up" should not be later than 1 P. M.

101. A box should be provided for outgoing mail, this box should be placed in a convenient place at headquarters and organizations should be notified of its existence. Mail should be distributed at headquarters and at Mail Call a man from each company should proceed to headquarters and obtain that belonging to his organization. Officer's mail should be distributed by the orderly, who should see that it is delivered to him in person or left in his tent.

102. The Adjutant should see that a list of calls is promptly gotten out as soon after arrival in camp as possible. He should first ascertain from the Camp Adjutant what is desired in this respect, then conform to it. If bugle calls should be forbidden a "list of formations" should be gotten out, in order that all organizations should know the hours of their duties. One copy of the list of calls should be furnished each Major, one to each company, one for the guard, one posted at headquarters and one retained in the field desk for future use.

A sample list of calls is given as a guide, to be altered as circumstances warrant.

List of Calls

Reveille: First call	5:15 A. M.
March	5:25
Assembly	5:30

Stables immediately after reveille.

Mess call, breakfast	6:00
Sick call	6:30
Inspection of camp	7:00
Water call	7:00
Drill: First call	7:20
Assembly	7:30
Recall from drill, or exercise	11:00
First Sergeant's call	11:30
Mess call, dinner	12:00 Noon
Drill: First call	1:20 P. M.
Assembly	1:30
Recall from drill, or exercise	3:00
Stables, preceded by watering	4:00
Mess call, supper	5:00
Retreat: First call	5:45
Assembly	5:55

Retreat followed by company inspection.

Guard Mounting: First call	6:20
Assembly	6:30
Officers' call	7:00
Tattoo	9:00
Call to quarters	10:00
Taps	10:30

103. The Adjutant is responsible to his commanding officer that guard details are properly made out and notified. The adjutant or an officer detailed from headquarters mounts the guard.

104. The Adjutant should make out the orders for the guard, and submit them to the Commanding Officer for his approval. These should be made in duplicate, one being retained at headquarters and the other being delivered to the first Officer of the Day, to be transmitted to the entire guard, and at the end of his tour, given to the new Officer of the Day for the information of the new guard.

105. The Adjutant should see that the Guard Report is turned in after each guard is relieved and that it is turned over to the new guard after it has been checked by the Sergeant Major.

106. At guard mounting the Adjutant selects the cleanest, neatest and most suitable private as "Commanding Officer's Orderly," and informs the commander of the guard of the name of the private so selected.

Regimental Supply Officer

107. The Regimental Supply Officer is in command of the Supply Company. He should be an energetic officer and one who is wide awake and not afraid of work.

108. The regimental and company property is under the direct charge of the Supply Officer from the time it is turned over to him for shipment until it is delivered by him to the proper organizations at their destination.

109. Handling large amounts of heterogeneous property is a mean proposition at best, and requires systematic methods and plenty of authority exercised, if the results are to be satisfactory. He should make his plans to use all of his assistants to the best advantage and each should know what is required of him at all times.

110. By formulating some plan ahead of time, using his assistants and the necessary amount of authority, he can deliver property with precision and dispatch and absolutely no confusion. In case the entire regiment is located in the same city he may receive the company property for shipment in two ways:

He may give memorandum receipts for the property and handle it in bulk.

He may designate the cars and require the companies to load their property into these cars.

In either case the property of the different organizations should be kept together as much as possible to facilitate unloading. He should keep the keys to the cars, and, on arrival, not unlock a car until an officer is present to supervise the unloading. If receipts have been given for the property he should arrange to have them returned to him upon delivery of the property to the organization.

111. He should ascertain, in plenty of time before the date of the movement, just how many men, animals, wheeled vehicles and the approximate amount of property (number of cubic feet and weight) each organization expects to have transported, and should make estimates for the number and kind of cars.

If the journey is to exceed forty-eight hours a kitchen car should be provided for each train. When the cars have been placed at his disposal he should carefully inspect all cars, accompanied by a representative of the railroad; he should see that they come up to the conditions of the contract, and should then apportion the troops to these cars in such a manner as to ensure the greatest dispatch and conveniences in entraining and detraining.

112. While en route he should obtain the fuel and forage requisitions from the adjutant so that these supplies can be issued immediately after arrival at camp.

113.

Assistants.	Entraining.	Detraining.	Arrival in Camp.
Officer or Regimental Supply Sergeant.	Takes charge of the loading of property of Reg. Hdqtrs.: 1 Bn. Hdqtrs; Cos. A, B, C, D.	Takes charge of the unloading of the entire train and sees that the driver of each wagon load of property is furnished a slip of paper showing the organization belonged to. Stays at train until unloading is completed.	
Officer or Regimental Supply Sergeant	Takes charge of loading of property of 2d Bn. Hdqtrs., Cos. E, F, G, H, & Mach. Gun Co.		Goes to camp with Reg. Comdr. and awaits arrival of wagons. Receives slips from drivers and directs them where to go. Sees that each organization gets its own property.
Officer or Regimental Supply Sergeant	Takes charge of loading of property of 3d Bn. Hdqtrs., Cos. I, K, L, M, and attached sanitary troops.	Receives fuel and forage requisitions from Reg. Q. M. Ascertains where to draw rations, fuel forage, when and how. Finds out about water for cooking, bathing, & for animals and reports to Col.	Returns to camp as soon as possible, and informs each Bn. Adj. of all he has been able to learn regarding drawing of supplies. Takes charge of and goes with wagons going for supplies, and sees that such supplies reach their proper destination.

Regimental Supply Sergeant	Is assigned to duty by R. Q. M.	Same remarks as for entraining.	If supplies are drawn he should remain at camp and see that they are delivered and should check same. He has charge of all property at Q. M. store tent.
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114. No special duties are assigned to the Regimental Supply Sergeant on detraining; he can find plenty to do. He should be allowed to supervise the work that appears to him to be most important. The Supply Officer may direct him to do some particular work in lieu of the above.

115. The Supply Officer should communicate with the Camp Quartermaster as soon as possible and make his arrangements for receiving and receipting for the supplies to be furnished to the regiment. It is probable that the Camp Quartermaster will issue water cans and urinal cans; if so, they should be obtained and issued at once to the organizations, receipts being taken for them from organization commanders.

116. He should consult with the Camp Q. M. regarding the supply of straw, crude oil, and lime for the latrines and for use around the company kitchens, also whether or not straw is to be furnished for bed-sacks. He should make arrangements for furnishing the above supplies as well as fuel and forage and other necessities to the organizations at all times during the encampment.

117. In case the regiment breaks camp for a practice march his place is in command of the field train and he must make all arrangements for handling the supplies during the march. This will entail the use of some system and his assistants of the supply company must be assigned their duties in advance. They should be given their instructions as far in advance as possible and practical. In case he has to leave the train he should place the same under the command of one of his assistants.

118. He should keep well supplied with the necessary blank forms such as memorandum receipts, fuel and forage requisitions, telegraph blanks, and the necessary reports used in connection with subsistence supplies.

119. He should never issue property without retaining a receipt for it, nor should he ever receipt for property without retaining a copy of the receipt. When property is turned in

to him by an organization he should see that a receipt is given for the same. He should see that when field ranges are turned in that they are properly packed and cared for, and are complete.

120. Property remaining in the hands of the Supply Officer at the end of the period of field service should be accounted for by him as prescribed by regulations. At the conclusion of the period all accounts between the Supply Officer and the organization commanders should be closed.

Subsistence

121. The Supply Officer or other commissioned officer detailed for the purpose will see that the regiment is kept supplied with subsistence at all times. He should familiarize himself with the regular army methods of subsisting troops and he should be a close student of the manuals and regulations pertaining to the supply of troops.

122. Fresh beef, old:

Dark red meat and yellow fat (generally).

Marrow in bones hard and light color.

Hard, dark, thin cartilage.

Cartilage of breast bone, hard.

Fresh beef, young:

Light red meat and white fat.

Marrow in bones, soft and red.

Soft, white, and large cartilage.

Cartilage of breast bone, soft.

Condition, healthy:

Movements brisk; eyes bright and full; muzzle cold and moist; dung normal, neither watery, hard, nor blood stained; coat glossy.

When quiet, should be constantly chewing the cud.

If when lying down, should, when quietly raised, stretch.

Condition, unhealthy:

Movements dull and sluggish; eyes dull and hollow; muzzle hot and dry; heat at base of horns; coat dull; skin tight.

Should an animal not stretch itself on being quietly raised, or not chew the cud for any length of time, or stand apart from the other animals, or cower behind a bush, it should be looked upon with suspicion.

Weight:

Should be kept twelve hours before weighing, without food or water.

Net weight equals 55% of gross weight, when animal weighs 1,300 pounds or more; 50% of gross weight, when animal weighs between 1,300 and 800 pounds; 40% of gross weight, when animal weighs 800 pounds or less.

123. This officer receives rations for his regiment from the Camp Commissary, from supply trains, from depots or by purchase, and he issues them to the companies and detachments of the regiment. When damaged stores are received they should be promptly disposed of by certificate, or by the action of a surveying officer.

Stores which have been received and have deteriorated, but are of value for purposes other than for human food, will be condemned and sold at auction; and prior to sale, the accountable officer will cause each can, box, bottle, or other container to be stamped or indelibly marked as follows: "Deteriorated military supplies condemned and sold under Section 1241 Revised Statutes."

124. A full day's ration is the unit. Fractional parts of the unit for a fractional part of a day are not allowed. Enlisted men joining at or before dinner hour of a given day will be allowed full rations for that day. A fraction of a ration less than one half is disregarded, and a fraction of a ration more than one half is considered a ration. It is best to compute rations allowed to an organization on money allowances and allow organizations to draw what they require, charging them with the value of supplies drawn. This charge is made against their allowance.

125. After rations leave the commissary they are in the keeping of the troops, and any loss sustained is theirs. Except in case of emergency, canned roast beef should not be issued oftener than two days in ten, and not at all unless vegetables can be provided and cooking facilities are provided.

126. The ration return of each organization or detachment will include all enlisted men belonging to it, or attached to it for rations. Officers are not allowed a ration.

127. When transportation is limited the supplies will be limited to the necessary ration articles. For proper storage space allow at least one square foot floor space to each twenty-five rations, garrison. Such articles as coffee, tea, sugar, flour, etc., are injured by decaying vegetables.

128. Subsistence property in the field is limited to commissary chests and their equipment of tools: necessary stationery, blanks, etc.; folding platform scales; field safes.

129. Bread will be baked in the field in Division Bakeries, whenever practicable. Otherwise it is usually purchased in the nearest town.

130. The folding platform scale issued for use in the field is for three hundred pounds capacity, scale graduated to show one-fourth of a pound. Dimensions of platform, thirteen by twenty inches, weight ninety-seven pounds.

131. For railroad journeys exceeding forty-eight hours (including allowances for delays), and the number of men to be transported exceeds thirty, one kitchen car for each two hundred men or fraction thereof should be furnished; if a kitchen car cannot be obtained a baggage car properly fitted up with ranges will be used. The contractor furnishing kitchen car should furnish full mess equipment, cook, cook's helper and ice for the preservation of supplies. The garrison ration should be used.

132. Data concerning the ration is contained in Chapter VI of this manual.

The Battalion Adjutant

133. The Battalion Adjutant is a staff officer and is assistant to the Battalion Commander. He should be familiar with the work of an adjutant in order that he can perform the duties required of him when the battalion is acting alone.

134. He should be familiar with all the papers used by the various companies and should be an authority on them in his battalion. He should know enough about the Regimental Adjutant's work to enable him to perform the duties of that office in case of necessity.

135. He does not need a field desk at maneuvers unless his battalion is acting alone. He should keep his papers, etc., in a suit case, or a small, convenient, and portable box.

136. He should seek information of every kind and distribute it to his battalion, but he should be careful not to give out any information that is not authorized. He should assist the major of his battalion in every possible way.

137. Upon establishing camp he should see that a detail of one man from each company of the battalion is furnished to put up the battalion headquarters tents and he should designate the location to the detail and see that they are put up. For this purpose he might detail one of the men of the detail in charge of the work.

138. He is advised to familiarize himself with the remarks herein regarding the duties of the "Regimental Adjutant."

Regimental Surgeon

139. The duties of this officer are briefly as follows:

In camp:—

To instruct the regiment in personal hygiene and first aid.

To care for the sick in camp.

To examine for infective diseases when suspected.

To isolate infective cases.

To organize and instruct the sanitary personnel, called the "Sanitary Detachment."

To procure, or improvise, field sanitary apparatus.

To destroy mosquitos and flies.

To prepare and apply disinfectants.

To supervise the water supply and properly purify it.

To supervise the sanitation of kitchens and cooking places.

To supervise the preparation of latrines and urinals, see that they are properly cared for, that they are properly filled when organizations leave the camp or when discontinued. That old sites are marked.

To supervise the collection, removal and disposal of waste.

To supervise the places designated for washing dishes, and the proper disposal of dish water.

To supervise the police of places designated for bathing and washing clothing.

To hold sick call at the proper time.

He should make an inspection each day at about the same hour. He should make a detailed report in writing to the Regimental Commander immediately after this inspection, including in this report all irregularities he has observed and stating in which organization they occur. This report should be submitted before retreat. He may be required to accompany the Regimental Commander when the latter inspects the camp.

140. In combat.

To give first aid to the wounded.

To remove wounded to places of safety near the firing line

To direct wounded to the firing line, or to dressing stations as circumstances may warrant.

To transport, in exceptional cases, severely wounded to dressing station.

To establish, during the later stages of the combat, one Regimental Aid Station for the regiment, or detached battalion.

141. On the march:—

To properly care for the sick, injured, and foot-sore.

To admit to the ambulance only those cases that are in need of being there.

To assign the sick to wagons of the Supply Train, when the ambulance becomes crowded, or is needed for emergency.

To see that a Medical Officer is with the ambulance when it is with the regiment.

To send the ambulance to the ambulance train at night, if not otherwise directed.

To have the name of any man who falls out, without a note from the company commander, reported to him.

To have the personal equipment and clothing of men who fall out properly cared for, when these men are admitted to the ambulance.

To warn troops against drinking water at a halt when there is reason to believe that such water is dangerous to their health.

142. The Regimental Infirmary is the ordinary provision during field service; but it is not intended for the very ill, nor for dangerous infective diseases. The Regimental Hospital will ordinarily be used only when the regiment is so isolated that patients cannot be readily transferred.

143. The equipment for the Infirmary or Regimental Hospital is prescribed by orders from the War Department, issued from time to time.

CHAPTER IV

DUTIES OF OFFICERS (Company)

The Captain

144. A captain of a company has a very responsible position to fill, especially so if the company be a mounted organization; he should realize this fact and should leave no stone unturned to make himself a good company commander. Books alone will not make him one; they point the way, but the rest depends entirely upon his energy and desire to learn by observing the mistakes of others.

145. In his spare time he should visit the camp of a regular organization of his branch of the service, introduce himself to the organization commander and get as much information as possible about handling the organization and the system used by the regular troops.

146. Any company commander who resides near a regular army post, and who can possibly spare the time should endeavor to accompany a regular organization on one of its short practice marches; even one day would be of benefit, two or three would be better. He should write to the adjutant of the regular troops and ask to be allowed to go and to be attached to a company; he is sure to get a favorable and courteous reply.

147. After the captain has trained himself he should train his lieutenants and his non-commissioned officers, giving each of them something to do and seeing that they perform their work in a proper manner.

Preparation for Field Service

148. As soon as the captain receives the order directing his organization to go into the field he will find out definitely how many men will be present and how many will be absent and the authority for such absence. He will notify the regimental adjutant of the above without delay.

149. He will obtain a supply of the following blank forms:—

- 4 copies Muster-Pay Rolls (Form 367 and 367a Q.M.C.).
- 4 copies Field Return (Form 26 A.G.O.).
- 1 copy Duty Roster (Form 342 A.G.O.).
- 1 copy Morning Report:
 - Troop, company, battery, detachment (Form 332 A.G.O.).
 - Field and staff (Form 333 A.G.O.).
- 1 copy Sick Report (Form 339 A.G.O.).
- 1 book Ration Returns (Form 223 Q.M.C.).
- 6 copies Fuel and Forage Requisitions (Form 218 Q.M.C.).
- 12 copies Memorandum Receipt blanks (Q.M.C.).

150. He should see that his men are properly fitted for shoes and that their shoes are properly broken in as required by regulations.

151. He should take to camp all Service Records of men belonging to his organization together with all papers or orders which have to do with promotions, appointments, etc. He should have all data which will be required in making up pay and muster rolls. By keeping a bound file of all orders, letters, etc., that may from time to time affect his organization he will be sure of having these important papers on hand when they are needed; a loose leaf binder is recommended. These records should be kept in the field desk ready for instant field service.

152. The captain should make a thorough inspection and check off all tentage, equipment, wheeled transportation, animals, etc., before going into the field and should see that everything is in good condition and that nothing is short.

153. To prepare and inspect tentage for camp so that it may be quickly set up on arrival, the following method is suggested:—

a. Set up all tentage, including kitchen fly, officers' tents, and latrine screen.

b. Procure some large shipping tags, cord, baled hay, wire, and gunny sacks.

c. Take down one tent at a time, fold the tent and its fly and tie them together, bind all poles together with baled hay wire, turning in the clipped ends of the wire so as not to tear tentage; put the pins in a gunny sack.

There will thus be three bundles for each tent. Each tent should be tagged, "Captain," "Lieutenant," etc., those which are to be used in quartering the men being tagged with the number of the squad.

In number 1 gunny sack of pins, should be the long piece of

cord, rolled on a stick referred to in the next paragraph.

154. For convenience in quickly laying out a line of company tents, a long, strong cord, with pieces of linen tape tied at intervals and numbered, will be found handy. The free end of the cord should contain a tape at the end, marked "Front pole officer tent," thence along the string 25 yards to next tape, marked "Store tent, middle," thence 10 yards to tape, marked "Front pole Kitchen," thence 10 yards to "Corner pin No. 1," thence 8 yards to "Corner pin No. 2," and 8 yards for each tent thereafter. This applies to Conical and Pyramidal tents only; if Wall tents are used reduce the interval to 7 yards, and if common tents are used reduce the interval to 6 yards.

155. Every horse and mule should go into the field well shod; company commanders of mounted organizations should look after this in advance. Extra shoes, fitted, should be taken for each animal.

156. All wheeled transportation should be put in condition, spare parts should be obtained, axles should be greased and plenty of grease should be taken along.

157. Harness and saddle equipment should be overhauled and put in condition; any equipment not marked should be so marked with the designation of the organization. Crown soap should be used in cleaning leather.

158. The field range should be overhauled and contents carefully checked to see that none is missing. It should be thoroughly cleaned. A company field range, designated as Range Number 1, is sufficient for 111 men. If the company exceeds this number two Number 1 ranges, or a Number 1 and a Number 2 range should be taken.

159. Company commanders should make provisions for a good hot meal immediately upon arrival at camp. This meal should be of such articles as require the very least cooking, canned goods are preferred. Hot canned corned beef hash, bread, jam or tomatoes and coffee would make a quick meal, and a good one. The announcement, on detraining, of a good hot meal soon after arrival in camp would do much to keep the men in the company camp.

160. Certain papers should be filled out as nearly as may be before entraining, and completed en route. They are one

Field Return, Ration Return, and Fuel and Forage Requisitions.

161. The captain should inspect the cars his organization is to occupy, and see that sufficient space has been afforded his command without crowding (three men to two seats, or three to a section); that there is sufficient drinking water; that the toilets are clean and supplied with toilet paper and are in an operating condition; in fact, that the cars are in a satisfactory condition throughout. If he finds this is not so, he should complain at once to the Regimental Supply Officer. In case his command is traveling alone he should make his complaints to the representative of the railroad.

162. Trains should be loaded in the following manner:—

In box cars locked and sealed before departure:—

Company property, property of officers and men, ammunition, rations, sanitary stores, tentage, cooking utensils, arms and equipments not carried by the men.

On flat cars:—

Guns and artillery carriages, pontoons, Signal Corps carts and wagons, wagons, ambulances.

In box cars:—

Forage.

In baggage and kitchen cars, under guard:—

Checkable baggage, rations for use en route, arms and equipment, if desired. If hot coffee is desired en route save out a G. I. pail and some ground coffee. This coffee can be made by turning on hot steam from the engine.

In stock cars:—

Animals.

In coaches and sleepers:—

Enlisted men; Officers.

163. Each mounted soldier's equipment, except halter and saddle bags, is securely tied in a gunny sack, marked with the troop number and the letter of his troop, and loaded in the proper car. The troop then deposits arms and equipments in coaches, leaves a guard, returns and loads horses. If animals are likely to be unloaded at some place that has no loading facilities a portable ramp should be carried. Halters are left on, animals are loaded into each end of the car alternately, the most gentle opposite the door being loaded last.

Entraining

164. The Captain should know how many men are to be placed in each car and should divide his company accordingly, placing an officer in charge of each subdivision. He should have the company entrain; the officers enter the cars first followed by the non-commissioned officers in order of rank, they should assign temporary seats (3 men to 2 seats) as the men enter, beginning nearest the door, and should require all men to be seated at once and remain seated until all men assigned to that car are in their places. The Captain supervises the loading and inspects to see that all men are taken care of and then turns the car over to the senior non-commissioned officer in each car with instructions to keep all men on the train. Guards should be posted at the doors at once and instructed in their duties. The Captain and his officers may then leave the cars and proceed to the part of the train assigned to officers.

165. He should see that provision is made for soap, hot water, and dish toweling for washing and drying mess kits after each meal. On long journeys only the haversack and mess outfit should be allowed in the cars, all other equipment should be properly boxed and stored in the baggage car, sufficient rifles and pistols left out for guard duty.

En Route

166. The senior non-commissioned officer in each car is in charge of the car, and must prevent spitting on the floor, defacing woodwork and windows, and all manner of disorder. He must prevent men riding on the platforms, steps, or tops of the cars, using sentinels at the doors for this purpose. No liquor should be allowed in the cars.

167. No smoking must be allowed in or around the cars containing animals or forage.

168. The Captain should satisfy himself that mess kits are cleaned in hot soapy water, rinsed and dried after each meal. He should make tour of his cars at each meal to see that his men are getting proper meals.

169. He should see that the aisles are kept clear, that men's rifles and equipment are properly cared for and kept out of the way. He should forbid any quarrelling or wrangling on the part of any of his men and the train crew. Complaints should be

made to him and he should take the matter up with the Commanding Officer of the train.

170. Papers specified in paragraph 160 should be completed, approved and ready to submit at once upon arrival at detraining point, unless called for sooner.

Detraining

171. On arrival at detraining point, the company should remain on the train until ordered out, when it should leave the cars quickly and form outside. One officer should then go through the cars to see that nothing is left behind. He should also note the condition of the car. The cars should be policed before detraining.

172. As soon as the roll has been called the unloading detail should fall out and go to the baggage car to unload property; this detail should consist of a non-commissioned officer and 4 privates. The non-commissioned officer of this detail should report to the officer in charge of the unloading of the train. The company is then ready to proceed to camp.

173. In mounted organizations the men are marched to the stock cars, where they obtain their mounts and equipments. If the troop is to remain and unload property a picket line can be established near by, animals tied to it, equipment placed near it, and a guard stationed.

Arrival at Camp

174. As soon as the Colonel has issued his directions as to pitching camp, the Captain should get camp established at once.

175. In order to promptly establish camp, it is necessary to proceed in a systematic manner. Each officer, non-commissioned officer, and private should be given some definite duty to perform. The Captain should assign duties to the Lieutenants, and the First Sergeant should, by publishing his details, assign duties to the non-commissioned officers and privates. This division of duties should be announced before ranks are broken, preparatory to setting up camp.

176. A mounted organization should form line parallel to and facing the position the tents are to occupy, unsaddle, and place the equipment on a line one yard in front of the mounts, establish a temporary ground picket line immediately in rear of the line of animals (or in prolongation of the line of company tents depending on the camp site), tie the animals to the picket

line and leave one man to watch them. Horses should never be tied to the picket line with saddles, bridles, and equipment still on them, they will roll and injure the saddles and arms, or get their feet through the reins of the bridles and break them. Camp should then be established as for dismounted organizations, except that shelter tents are pitched on the line of saddles of the front rank. (See Cavalry Drill Regulations.)

177. The picket line should later be made of a more permanent character, a line raised about four feet off the ground being advised for militia organizations whose horses may not be familiar with a ground line. The picket line should be cleared of all stones, brush, stumps and shrubs, and anything that will cause the animals discomfort in attempting to lie down. It should be carefully ditched, the earth being thrown to the inside, so as to slope the ground for better drainage. Small stones, pebbles and sand may be used to advantage to prevent the picket line from becoming muddy in wet weather.

178. Infantry stacks arms and removes equipment, Cavalry and Artillery unsaddle and unhitch and tie animals to the picket lines. The following details are then announced:

- (a) Detail for latrine.
- (b) Detail for putting up kitchen, store tent and getting water.
- (c) Detail to put up officers' tents.
- (d) Detail to Regimental headquarters.
- (e) Detail to Battalion headquarters.
- (f) Detail for Kitchen Police.
- (g) Detail for Picket line.
- (h) Rest of company put up tents.

179. If shelter tents are used, they should be put up before any details are made, except those for headquarters, latrine, and kitchen, depending on whether or not property has arrived at camp. In pitching shelter tents, no space is left in the line for the tents of the men who are not present; such tents are pitched in prolongation of the line as the men arrive. Property should be taken from the wagon and assorted on the ground. As soon as the wagon has been emptied, it should report back to the proper officer.

180. As soon as tents have been pitched they should be ditched. Part of the ditch should be inside of the tent wall and

part outside, so that the pegs that hold the wall in place are *in the ditch*. When the rain strikes the vertical walls of the tent and runs down them it runs into the ditch and is carried away. Dirt should never be thrown against the walls of the tent, it rots them. It may also be necessary to ditch the company street so as to drain the water away from the tents.

181. As soon as tents are ditched the entire company camp should be policed. Leaves should be raked up and burned with other rubbish, tin cans should be hauled away and the whole place made to look neat and clean. Straw, leaves, or boughs should be collected for bedding as soon as other duties are completed. An improvised ice box should be constructed. One of the best ways of doing this is to put a small box inside of a large one, the space between being filled with sawdust, hay, oats or sand and a cover made to fit tightly over both boxes; one may be constructed by sinking a box into the ground having an air space all around it and providing a cover. This one should be taken up every few days and the ground allowed to dry out before the box is returned; all ice boxes must have holes in the bottom for drainage.

182. The Captain should see that the kitchen and latrine are in operation before anything else is done, or at least while other things are being done.

183. When camp is completely established, men fed, streets policed, tents ditched, picket line established, rations, fuel and forage obtained, the company officers and men should be allowed to leave camp providing there are no other orders; but no one should be allowed to leave camp until all duties have been performed.

Camp Life

184. Duties in camp should be performed in a systematic manner from day to day, and by as few men as possible. This may be accomplished by having duties performed by details published by the First Sergeant at reveille and retreat and posted on the bulletin board.

185. Unless there are orders to the contrary one of the company officers must be present and in command of the company at reveille, stables, watering, and retreat. He should also be present at each meal. The captain should take his turn at these

duties, each company officer taking all of the duties for one day, in turn.

186. At reveille, the men should be required to be in ranks promptly. The First Sergeant should again read the details that have been published at retreat the night before. If the organization be a mounted one the men should fall in ranks with nose-bags, curry combs, and brushes.

187. Immediately after reveille, before ranks are broken, a mounted organization should be marched to the picket line, filing past the Stable Sergeant, each man obtaining a nose-bag full of oats. As soon as the nose-bags are put on grooming should be commenced, the animals being groomed as they eat. Horses of men absent are assigned to squads and fed and groomed by the squad. The stable guard should feed hay and attend to policing the picket line. They should also feed any animals brought to the picket line after the other animals have been fed. As soon as grooming has been completed, or if the organization is a dismounted one, immediately after reveille, bedding should be aired, tent walls looped up and the company street policed before breakfast.

188. The officer who is present for breakfast should inspect the condition and amount of food the men get, see that the grounds are policed after the men finish, that the mess kits are washed properly and put away. He should have his breakfast *before* the men have theirs; he may get it while they are policing camp, etc.

189. Soon after breakfast sick call sounds. The First Sergeant enters the names of sick men on the sick book, takes the book to the Captain for his signature, then sends the sick men with the book to the Surgeon in charge of a non-commissioned officer. Great care should be taken not to send any men to the Surgeon who are *not* sick.

190. As soon as the sick book is returned the First Sergeant completes the morning report, submits it to the Captain for signature, then takes it to Headquarters before the hour set for it to be in. He also completes any other papers necessary, such as ration return, requisitions, etc., places them before the Captain for signature, and sends them to the proper place.

191. At First Sergeant's call, or the hour designated, the Captain should proceed to headquarters and make notes of any-

thing on the bulletin board affecting his company. The First Sergeant should also make such notes.

192. At Water call, the troop is formed in ranks with watering bridles, marched to the picket line by an officer, formed in ranks mounted with led horses, and the troop animals are watered.

193. Dinner should be superintended by an officer.

194. Evening stables are conducted as explained for morning stables. They are under charge of an officer.

195. At retreat, the men fall in under arms, roll is called and retreat ceremony proceeds. Following retreat the officer commanding makes his report to the Adjutant or Officer of the Day from the end of his company street, returns to his company and makes an inspection of the dress and equipment. Each rifle should be carefully inspected and men whose rifles are in bad condition should be given extra tours of fatigue in addition to submitting their rifles to the officer for a second inspection. The First Sergeant should publish, at retreat, all his "details for tomorrow"; he should post them on the bulletin board and leave them there for twenty-four hours.

196. Supper should be superintended by an officer.

197. Guard Mounting is usually in the evening in camp. The guard detail forms in its own company street, is verified and inspected by the First Sergeant and marched to the designated place by the senior non-commissioned officer of the detail.

198. All noise should cease at taps.

199. If the company is an independent organization the Captain will have to prepare his own list of calls and duties; look to the sanitation and health of his men; attend to his own supplies and transportation; and, in fact, do a great many things usually looked after by the Colonel, Adjutant, etc. He is therefore advised to consult the remarks under these headings. He should detail one of his lieutenants to assume the duties of Supply Officer in addition to his other duties.

200. Company kitchen refuse is disposed of in several ways. The best methods appear to be by means of company incinerators or incinerators under the field range.

Company incinerators are constructed as follows:—A pit is dug about 5 feet long, $2\frac{1}{2}$ feet wide, 6 inches deep at one end and 12 inches at the other; the excavated earth is banked around

the pit, and the latter is then lined with stones, bottom, ends, and sides, using good sized stones, about the size of two fists. By means of a hot fire kept burning all of the time the stones become hot, and when kitchen liquid refuse is poured on them it soon evaporates. The liquids should be poured on the stones all around the pit. The solid matter should be burned on the fire. All tin cans should be thrown on the fire and later raked off when completely melted apart and all food matter burned from them.

In case the incinerator is to be constructed under the field range proceed in same manner as above except be careful not to make the pit too large for the range. Liquid and solid refuse is disposed of in a similar manner as described above.

If there is not sufficient wood, or stones are not obtainable, some other method will have to be adopted. One such method is to dig a hole in the ground, say 4 feet deep, 2 or 3 feet square, with a cover to keep out flies; refuse is dumped into the pit and same is burned out daily with oil and straw. A little lime should be sprinkled around the ground each day where refuse is liable to collect.

1/12 of a cord of wood per day is allowed for each incinerator.

201. The following instructions are recommended to company commanders for the use of their organizations:—

1. Give constant attention to PERSONAL CLEANLINESS.

2. IF SICK, report to the Surgeon (through the First Sergeant) at sick call, or when necessary.

3. Keep the BOWELS in good condition; do not become constipated.

4. Relieve the BOWELS and BLADDER at the sinks only, and cover the stools with paper and dirt.

5. A URINAL CAN will be placed in the middle of the company street at night.

6. NO FOOD is to be taken to quarters.

7. Throw all GARBAGE (refuse from mess kits at meals, etc.) into kitchen garbage pit, or incinerator. Do not throw it on the ground to attract flies.

8. Wash mess kits in hot, soapy water, rinse, dry, and put in haversacks.

9. Canteens should be scalded in hot water before being used, and nothing put in them that will sour.

10. Fill salt, pepper and sugar bags before a march or train journey; they do not need to be filled in camp.

11. Drink only the WATER supplied for camp use; or, on the march, that approved by a medical officer, or company commander.

12. TYPHOID FEVER usually comes from bad water.

13. Beware of water from wells and streams. A well situated near an outhouse should be shunned.

14. It is dangerous to eat ICE CREAM sold by peddlers in the field. No one knows what it is made of.

15. *Cooks* must keep their hands, cooking utensils, and cloths clean.

16. *Cooks* must not sleep in the kitchen or supply tents.

17. Everything around the kitchen tent must be kept free from flies.

18. There must be NO SMOKING near the picket line, or forage pile.

19. A soldier should care for his HORSE first and himself last.

202. Relative to the above list of instructions the company commander is advised:—

To see that suitable bathing facilities are provided.

To see that the First Sergeant knows to what Surgeon to send the men at all times, and where, and how to get an ambulance in case of accident.

To have some compound cathartic pills in the First Sergeant's field desk and haversack for issue to any man calling for them, and have the men so notified.

To have a bucket, used for a urinal can, placed in the company street at night with a lantern by the side of it.

To require the men to mess at a designated place and not allow them to carry their mess outfits into their tents. A suitable place should be provided for use in case of rain in any but over-night camps.

To see that a suitable means for the disposal of garbage is provided. If company incinerators are used to see that men dump refuse from their mess kits on the fire; if pits are used to see that they are covered and limed around the top.

To see that two large receptacles of hot water are provided at meals for washing mess kits; G. I. buckets swung over the incinerator are recommended. One bucket should have soapy water in it and the other clear water; the former for washing and the latter for rinsing. The cooks should have half a dozen wiping cloths (flour sacks are good) kept hanging on a string in a convenient place for the men to use on their mess kits. They should be required to boil these cloths out after each meal and hang them out to dry.

To see that the men do not fill their canteens with milk.

To see that salt, pepper, and sugar are issued to each man before a train journey.

To give careful attention to the water supply that is used for drinking purposes.

To endeavor to prevent his men from eating or drinking articles sold by peddlers at all maneuver camps. This is especially necessary on practice marches.

To keep after his company cooks all of the time, and require them to be clean about their personal appearance, hands, utensils, dish cloths, and the police of the kitchen.

To do everything in his power to keep flies out of camp—they carry disease germs.

To see that the cooks have a place in the company tents assigned to them—usually near the kitchen.

To see that the stable guard prevents smoking around picket line or forage pile.

To see that no hay is removed from the forage pile for bedding of men.

To see that individual mounts are properly cared for.

First Lieutenant

203. The Captain should assign duties to the 1st Lieutenant. They should be more advanced than those assigned to the 2nd Lieutenant and should allow him more latitude in their execution.

204. The First Lieutenant should supervise the company paper work and the preparation of the required rosters and returns. He should also have charge of the police of the camp and the picket line.

205. He should be familiar with all of the Captain's duties and be able to perform them in his absence or when so directed.

206. Upon the arrival of the company at camp he should put up the picket line and the officers' tents in the places designated for them. He should then assist the Captain with the work of establishing the camp.

207. Upon breaking camp he should have the field return made out and signed by the Captain and should see that it is delivered to the Regimental Adjutant before the departure of the organization. He oversees the taking down and police of the picket line, and the police of the camp before departure, and then assists the Captain.

Second Lieutenant

208. The Captain should assign duties to the 2nd Lieutenant.

209. The Second Lieutenant should supervise the mess, obtaining supplies. He should supervise the construction of the latrine, should see that the kitchen tent is properly put up and that the incinerator is properly constructed. He should learn as much as possible about the company paper work and should know how to make out the required reports and how to keep the rosters properly.

210. He should be familiar with all of the duties of the Captain and the First Lieutenant and be able to perform them in the absence of either or when so directed.

211. Upon arrival at camp he should see that the latrine is properly placed and constructed and that the kitchen fires are started at once and the meal gotten under way; he should see that fuel, forage, rations, and water are obtained promptly. He should assist the Captain in establishing the camp.

212. Upon breaking camp he has the kitchen property properly cleaned and packed, has the tent taken down and folded, turns in what property is to be turned in and gets receipts for such property. He has the latrine pit filled and marked before the departure of the company. He supervises the loading of property on wagon.

CHAPTER V

DUTIES OF NON-COMMISSIONED OFFICERS

Regimental Sergeant Major

213. He is a member of the Headquarters Company. He is the Adjutant's assistant or chief clerk. He should read over the remarks given herein concerning the duties of the Adjutant.

214. He has as his assistants the Battalion Sergeants Major and the necessary number of clerks.

215. He keeps the roster of the guard and makes out the guard detail for the enlisted quota of the guard. In respect to this see *Manual of Interior Guard Duty* which fully describes how this is done.

216. Under the direction of the Adjutant he keeps all records, orders, and data pertaining to Regimental Headquarters.

217. He makes out the consolidated morning report from the data contained on Company, Troop, Battery, or Detachment morning reports each morning and submits it to the Adjutant. Organization morning reports should be in the hands of the Regimental Sergeant Major by 8 o'clock each morning. It is recommended that he turn over all papers concerning companies in the various battalions to the Sergeant Major of such battalion to be checked by them and corrected if necessary.

218. At First Sergeant's call each morning he has the morning reports turned over to the First Sergeant of the organization to which they pertain; any special information that should be transmitted to the companies of the regiment should be furnished to First Sergeants at this time. Usually this information is placed on the bulletin board and the First Sergeant is required to sign that he has read all information so posted.

219. Envelopes should be prepared marked, "Co. A," "Supply Co." etc., in which he puts orders, instructions, reference notes, etc., pertaining to such organizations and which are delivered to the First Sergeant at First Sergeant's call or at such other time as may be necessary. All orders or instructions, when delivered, should be signed for in a book provided for that purpose. Orderlies, when delivering orders to Officers or First Sergeants, should take this book with them and should

camp near Regimental Headquarters; he should see that the latrines used by the officers are properly cared for each day; he should see that waste or rubbish collected by the companies and not disposed of is hauled away and destroyed; he should have his detail police the officers' baths and see that no rubbish is allowed to collect in the vicinity of same; he should assist in pitching the headquarters tents when camp is established. The other should be assigned to such duties as appear to be most necessary and are commensurate with his rank.

Battalion Sergeant Major

234. The Battalion Sergeant Major is a member of the Headquarters Company. He should be familiar with the duties of the Regimental Sergeant Major and should read over the part of this book referring to him. He is an assistant of the Regimental Sergeant Major. He should be familiar with paper work and be an authority on the subject. He should be assigned the work of checking the papers submitted to headquarters by companies of his battalion and should not turn in any that are incorrect.

235. When the battalion is acting alone he performs the duties specified for the Regimental Sergeant Major. In case the Regimental Sergeant Major is absent, the senior Battalion Sergeant Major performs his duties.

Senior Sergeant Sanitary Detachment

236. His duties are somewhat similar to those of the First Sergeant of a company. He should read over the remarks contained herein concerning the duties of the Regimental Surgeon.

First Sergeant

237.* He has more to do, exercises more authority, must have a more varied knowledge and must be a better soldier than a non-commissioned officer of any other grade in the service. If he is systematic, a tactful disciplinarian, and wide awake, he will be able to get good results from his men.

238. A poor First Sergeant makes a poor Company, a good First Sergeant, a good Company. No matter how efficient a Captain may be, he cannot obtain the best results if his First Sergeant is worthless; and no matter how poor a Captain may

be, the Company will get along if it has a good First Sergeant. The duties of a First Sergeant are so numerous that only the most important ones can be discussed herein, and they only briefly.

239. He should read this entire manual because nearly everything in it in some way directly or indirectly will probably at some time affect him.

Duties in General

240. He should maintain discipline among his men by retaining their respect and good will without permitting any familiarity. Must be absolutely fair and impartial in his dealings with the men, and when on duty must have no friends or favorites. He must be familiar with all orders pertaining to the organization, equipment, allowances, etc., of his company as an organization, and of each individual man as a member.

241. It is absolutely essential that he know how to make out all of the company papers.

Detail System of Duty

242. He should see that the necessary work around the camp is done in a systematic manner, that each man does his share. To this end, he should handle the work by means of the detail system, detailing one or more non-commissioned officers in charge of a party of men, telling them what he wants done and holding them responsible that it is done properly.

243. a. As soon as a First Sergeant receives information requiring a detail of men he makes out the detail from his duty roster, taking the men longest off duty, then immediately posts the detail on the company bulletin board where it remains until retreat.

b. At "First Call for Retreat" the First Sergeant takes the details off the bulletin board (or uses duplicates) and at "Assembly" reads these details to the entire company. The details are then re-posted on the bulletin board.

c. At "Reveille" details are again read to the company, then again reposted.

d. When new details are made out they are posted on the bulletin board *over* the old details. In this way there is no

excuse for any man forgetting he is on a certain detail. Old details are left on the board to let the men see that details are made out fairly and duty evened up among them.

e. If a working party is needed at once the First Sergeant makes up a detail from such men as he can find, shows it to the non-commissioned officer in charge of the detail, posts it on the bulletin board, and credits the men so detailed on his duty roster.

244. The ordinary details, as Guard, Stable Guard, Kitchen Police, Non-commissioned Officer in charge of Quarters, etc., are usually written on one slip, as follows:

DETAIL FOR AUG. 5, 1917.

GUARD.

Sergeant Thomas.

Corporal Jones.

“ Adams.

Musician Brown.

Private Wilson, J. B.

“ Wade.

(Names of other privates in alphabetical order).

Supernumary Pvt. Carter.

STABLE GUARD.

Sergeant Hendricks.

Private Gunn.

“ Smith.

“ Adams.

KITCHEN POLICE.

Private Brockman.

IN CHARGE OF CAMP.

Sergeant Ware.

SPECIAL.

Corporal Wilson.

Private Carpenter.

“ Lewis.

REMARKS.

Special detail reports to
Regimental Sergeant Major
at 9 A. M. Aug. 5.

(Signed) W. K. Mayers,
1st Sergeant.

245. The details, and the usual number of men, that will ordinarily be required for a company are as follows:

- (a) GUARD: As directed by Regimental Headquarters.
- (b) STABLE GUARD: Usually one non-commissioned officer and three privates.
- (c) KITCHEN POLICE: 1 or 2 privates, depending on size of company.
- (d) IN CHARGE OF CAMP: 1 non-commissioned officer.
- (e) REGIMENTAL HEADQUARTERS: 1 Private.
- (f) BATTALION HEADQUARTERS: 1 Private.
- (g) OFFICERS' TENTS: 1 Non-commissioned officer and 4 privates.
- (h) KITCHEN: 3 Privates.
- (i) LATRINE: 1 Non-commissioned officer and 2 privates.
- (j) STABLE: 4 privates.
- (k) SPECIAL: Such number of non-commissioned officers and privates as may be required.

246. On establishing camp at least two squads of 1 non-commissioned officer and 8 privates each will be required to put up the company tents (quarters of the men) if pyramidal, conical, or wall tents are used. Consequently the First Sergeant must keep this in mind when making out the details for other duty; this is referred to as the "rest of the company" elsewhere. In case shelter tents are used this does not matter.

247. When the company goes on guard the men not detailed for this duty may be used for the fatigue details that will be called for by Headquarters. They should be required to remain in camp subject to call for any purpose. When details have completed the duty assigned to them they should return to the company and report to the First Sergeant.

248. The duties of the details referred to in paragraph 245 and the persons to whom they report are as follows:

- (a) Regular camp guard, as per detail furnished First Sergeant by the Sergeant Major.

excuse for any man forgetting he is on a certain detail. Old details are left on the board to let the men see that details are made out fairly and duty evened up among them.

e. If a working party is needed at once the First Sergeant makes up a detail from such men as he can find, shows it to the non-commissioned officer in charge of the detail, posts it on the bulletin board, and credits the men so detailed on his duty roster.

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(Names of other privates in alphabetical order).

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248. The duties of the details referred to in paragraph 245 and the persons to whom they report are as follows:

- (a) Regular camp guard, as per detail furnished First Sergeant by the Sergeant Major.

(b) Regular Stable guard, for mounted organizations only. Daily detail.

(c) A daily detail to report to the Mess Sergeant immediately after reveille. Their duties are to assist in the preparation of food, cutting wood, etc. Assist detail in kitchen when camp is established.

(d) A daily detail. Assumes his duties at reveille, relieving his predecessor. Has charge of the camp for twenty-four hours and remains there during that time. Preserves order. At "sick call," and when necessary, he marches those who are sick to the Infirmary, and takes the sick report with him. When the company is absent from camp he sees that no unauthorized person enters the tents; in general he looks after his company camp during the absence of the company. He must see that details not in charge of a non-commissioned officer leave on time for their duties. He has charge of the police of camp each morning after breakfast.

(e) Reports to the Regimental Sergeant Major immediately after the company falls out of ranks to begin to establish camp; also at a designated hour when camp is broken. Members of this detail form the Headquarters Detail and put up Headquarters tents and perform any other work that may be required. The Sergeant Major dismisses this detail. Not a daily detail, furnished only when establishing or breaking camp. First Sergeant is cautioned to get this man to headquarters *promptly*.

(f) Not a daily detail, furnished only when establishing and breaking camp. First Sergeant is cautioned to get this detail to Battalion Headquarters *promptly*.

(g) Puts up and ditches the company officers' tents when camp is established. Procures officers' baggage from wagon and delivers it to the proper tents. Strikes tents on breaking camp and loads tentage and officers' property on wagon. The non-commissioned officer assembles the detail; reports to the Company Commander for instructions as to the location of tents; supervises the work; reports again to Company Commander when work is completed and, when directed, reports to the company and dismisses the detail. Not a daily detail; furnished only when making and breaking camp.

(h) Reports to Mess Sergeant and assists with unloading of kitchen supplies; puts up kitchen fly and store tent; digs kitchen pits or builds incinerator, as directed by the Mess Sergeant. Will be required to assist with other details about the kitchen. Mess Sergeant dismisses the detail. In the absence of the Mess Sergeant the detail is under the orders of the senior cook. Not a daily detail; furnished only when making or breaking camp.

(i) The non-commissioned officer reports to the 2nd Lieutenant, or in his absence to the Captain, ascertains the location of the latrine; assembles his detail; procures from the Company Supply Sergeant 1 common tent or screen, 1 pick, and 1 shovel; digs a trench 5 feet long, $1\frac{1}{2}$ feet wide and from $1\frac{1}{2}$ to 4 feet deep depending on the length of stay in the camp; procures lumber and constructs a top for the trench, made with either seats or traps; puts up the tent or a screen; sees that dirt from the trench is inside of the tent and on the far side from the door if no top is made; procures lime if same is to be used and places it inside of tent or screen; makes a small paddle out of a piece of board.

On breaking camp this detail takes down tent or screen, fills trench, and marks the spot plainly with a board extending about 1 foot above the ground and marked "Abandoned Latrine, (date)". The non-commissioned officer dismisses the detail after work has been inspected by the 2nd Lieutenant and the detail has been ordered to return to the company. Not a daily detail; furnished only when making and breaking camp. First Sergeant should see that this detail goes to work immediately after company has broken ranks to establish camp.

(j) Reports to Stable Sergeant and, under his direction, establishes the permanent picket line; procures forage; and attends to any other duties required by the Stable Sergeant. On breaking camp this detail takes down and loads the picket line; cleans up rubbish; loads forage; attends to any other duties directed by the Stable Sergeant. It is dismissed by the Stable Sergeant, reporting back to the company. Not a daily detail; furnished when called for by the Stable Sergeant, and without call, when camp is to be established or

broken. Detail may be increased or diminished when necessary.

(k) Special details are those called for by persons having authority to do so. They may be furnished for any legitimate duty required of soldiers at any time. They may be dismissed when the duty is completed; this is done by the person calling for the detail. The person calling for the detail should specify the number of non-commissioned officers and privates desired. These details are usually called for when the company is on guard, and are taken from those men not actually members of the guard.

Detraining Details

249. The detail of enlisted men for detraining should consist of 1 Sergeant and 4 Privates. The non-commissioned officer in charge of this detail should report to the Regimental Supply Sergeant with his detail as soon as it falls out of the company. This detail unloads property from the cars into the wagons. The non-commissioned officer should see that property of the various organizations is kept together and that the driver knows where to go. If so directed by the officer in charge of unloading he should give the driver a slip of paper upon which is written the name of the organization to which property belongs. He should always sign his name to this slip.

With the above precaution taken the property should always reach its proper destination. If a man goes with the wagon, he should return with it to the train. When the property is all unloaded from the car assigned to this detail the non-commissioned officer in charge should report the fact to the officer in charge of unloading.

When all unloading is completed these details are directed to join their companies by the officer in charge of unloading. They are dismissed by the non-commissioned officer in charge after joining their companies.

Entraining Details

250. The usual details for entraining consist of 1 Sergeant and 4 Privates. This detail accompanies the first wagon load of property to the cars unless it is directed to report at that place at a designated hour. The non-commissioned officer in

charge of the detail reports upon arrival to the officer in charge of the loading and his detail is assigned to a car and proceeds with the loading as the property is delivered. The detail remains at the train until all property is loaded unless it is directed to return and join its company sooner by the officer in charge of loading.

Daily Camp Routine

251. The following is given as a guide to the First Sergeant's duties, to be altered as circumstances may require.

Reveille: Calls roll; reports to company officer the result of roll call; reads details for that day; dismisses company cautioning "Police of Camp, dismissed"; sees that the non-commissioned Officer in charge of Quarters superintends the police of camp: that men in skirmish line police the entire company camp ground from the Field Officers' line of tents to the Company Latrine. Men of mounted organizations usually fall in with nose bags.

Stables: If a mounted organization, he does not dismiss the company immediately after reveille but marches it to the picket line for morning stables and reports to the officer taking stables; camp is policed on the return from stables.

Breakfast: Immediately after breakfast he makes out the sick report; prepares the morning report as far as he can until the return of the sick report, when sick report returns he completes the morning report; makes out ration return if required (usually this is made out for a period of several days); makes out fuel and forage requisition if any is to be drawn that day; takes the morning report, ration return, fuel and forage requisition, together with all other papers to the Captain for signature; takes to the Regimental or Battalion Headquarters (as the case may be) all papers that are required to be submitted to headquarters, being sure to see that those that require the Captain's signature have been signed. Prepares his roll by checking off the names of those who are not required to attend formations that day.

Water Call: Forms the company and marches it to the picket line; superintends the watering of animals unless an officer is present. Accompanies the Company Commander on his morning inspection of camp, having previously seen that the camp is ready for inspection.

Drill Call: Forms the company; calls the roll or receives reports; reports result to the Company Commander.

First Sergeant's Call: Reports to the Sergeant Major at headquarters; inspects the bulletin board and makes notes of anything affecting his company; obtains his morning report and such other papers as may be given him by the Sergeant Major. Returns to his company and makes out his company details in accordance with instructions he has just received; posts these details on the bulletin board, together with any other details or instructions or orders that affect the company.

Water Call: Same as given before. This call is omitted except in very hot weather.

Dinner:

Drill Call: Same as given before.

Recall from Drill: After drill he attends to the necessary company papers, correspondence and records, if there are any to be attended to.

Stables: Evening stables are usually preceded by watering. He forms the company, marches it to the picket line, causes animals to be watered and reports to the officer taking stables.

Retreat: Forms the company, calls the roll or receives the reports, reads the "details for tomorrow" and reports to the officer taking retreat.

Supper:

Guard Mounting: Falls in the detail, verifies and inspects it, then turns the detail over to the senior non-commissioned officer and retires.

Note: The First Sergeant must prepare his roll before every formation; but usually there should be only a very few absentees.

252. Immediately after reveille each day is the usual time for the new Kitchen Police and the new Non-commissioned Officers in Charge of Camp to assume their duties for the day; the new Kitchen police reports to the Mess Sergeant; the new Non-commissioned Officer in Charge of Camp relieves his predecessor and receives from him any instructions that should be turned over to him and then reports to the Company Commander for orders.

Company Supply Sergeant

253. He has immediate charge of all company property, loading of wagons, loading and unloading of company property

and animals during entraining unless one of the company officers attends to this duty. When detraining he has charge of the unloading of property at the company camps; in case of the company has to unload its own property he has charge of this work.

254. He keeps records of the company property and the amount issued to each man, makes such reports as required by the Company Commander. He should see that retained receipts are always taken when property is obtained and that receipts are received whenever it is turned in or transferred.

255. He should see that fuel is furnished to his company and that crude oil, straw and lime are on hand when same is issued for sanitary purposes.

256. At detraining he should proceed to camp with the company and should receive and check his property as the wagons deliver it at the camp site. He should cause property to be delivered to the proper place. He should at once ascertain where wood, water, and straw for bedding are to be obtained and should direct the kitchen detail where to obtain fuel.

257. At entraining he should not go to the cars until all property has left the camp. The entraining detail looks after loading the property into the cars.

258. The following are the important duties of this sergeant when a move is contemplated:—

- a. He supervises all loading and packing.
- b. The loading detail should consist of a non-commissioned officer and 7 privates, it reports to him for duty.
- c. He has the detail pack, weigh, mark and list all property. He keeps a copy of this list in his record.
- d. He lists the property as marked, for use in shipping.
- e. He uses his detail for loading property on wagons and on the train. He remains at the train and sees that all property is loaded properly.
- f. He has the detail join the company when loading is completed.

Stable Sergeant

259. He has immediate general charge of the forage and picket line. He is held responsible for the proper policing and sanitary condition of the picket line and surrounding grounds. He has charge of the Stable Police or Stable Orderly (if there

is any) and requires them to police the picket line, remove manure, feed, etc. When there is no Stable Police or Stable Orderly and the Stable Guard, when not on post, assumes the duties of such police or orderly, this guard does so under the supervision of the Stable Sergeant.

260. When it becomes necessary to draw forage, or at other times when necessary, he will request from the First Sergeant a detail of men for this purpose unless he has a Stable Police. The Stable Guard not on post should not be required to leave the picket line for any appreciable length of time.

261. The Stable Sergeant should cause all horses that require shoeing to be shod. He or the Horseshoer should examine animals for loose shoes each day. He should see that all horses are re-shod once each month whether the shoes are loose or not. He should examine for injuries, sore backs, and sickness among his horses each day. He isolates any sick horse that may require it. He allows no horses on sick report to be taken from the picket line except by proper authority.

262. He issues forage, superintends the erection of the picket line and causes it to be stretched when necessary. He puts vicious horses or kickers by themselves or at the end of the picket line. He allows no animals to be tied to the wheels of a wagon except for temporary purpose. He, *in person*, sees every horse that is brought to the picket line and notices its condition. If the horse has been misused he reports the fact to the Company Commander, giving the name of the man who rides that horse.

263. He allows no horse to be taken from the picket line without authority—this, in the case of enlisted men, must be in writing. These written authorities are turned in next day to the Company Commander.

264. In field batteries, unless the camp is semi-permanent, the picket line is stretched between caisson bodies, and animals tied to it, not to the wheels of the carriages.

265. When animals are brought to the picket line in a heated condition the Stable Sergeant should require that such horses be walked around the picket line for half an hour or so until they cool. This should be done by the man returning the horse in such condition. The horse should then be blanketed and his legs hand rubbed, the blanket removed and the body

groomed. Never allow cold water to be put on an overheated horse, nor allow him to drink.

266. A horse is allowed 12 pounds of oats and 14 pounds of hay a day. A box 12 by 9 by 6 inches (inside measurement) will hold practically 6 pounds of oats when level full, and will be the amount of oats for one feeding of one animal if animals are fed twice a day. As pressed hay weighs about 11 pounds to the cubic foot, the Stable Sergeant may estimate about what 7 pounds of hay would be, or if he so desires he can compute it.

Mess Sergeant

267. The Mess Sergeant has charge of all that pertains to the company mess. He makes out the bills of fare, procures rations on the ration returns made out by the First Sergeant, using a detail from the kitchen to assist him in getting them; this detail usually consists of 1 cook and of 1 kitchen police.

268. He should notify the Supply Officer each day as to the amount of fresh beef, fresh bread, and ice that he will need the following day. On days when he draws rations he should submit to the First Sergeant a list of articles desired from the commissary. This list, after being approved by the Company Commander, is returned to the Mess Sergeant. The list is taken to the commissary when rations are drawn and handed to the Supply Sergeant to enable him to issue just what is desired. The list should show:

- (a) Organization submitting list.
- (b) Name of each article desired.
- (c) Number of pounds, cans and their size, gallons, etc., of each article desired.
- (d) Approval of the Company Commander.

269. He should see that the kitchen and surroundings are kept scrupulously clean *at all* times, that refuse from the kitchen and from the men's mess kits is not dumped on the ground, but is disposed of in the proper manner. He should require the cooks to be clean in their personal appearance, have clean hands and clean clothing. He should require them to use clean pots and pans, not greasy ones. He should require plenty of wiping cloths in the kitchen and should have them boiled out at least once each day and hung up on a line to dry (preferably after each meal). There should be plenty of wiping cloths for the

mess kits of the men and they should be kept on a line separate from the kitchen cloths; they should be boiled out and dried after each meal.

1/12 of a cord of wood per day is allowed for the company mess fires and the same amount for the incinerator.

270. He should provide two pots or cans of boiling water for washing mess kits at each meal. A piece of soap should be put in one of these with a stick containing a rag-swab tied to one end of it; the other pot should contain only clear water for rinsing purposes. Men should scrape the refuse from their mess kits into the incinerator or pit and then wash the kits, rinse them in the clear water, dry them, and put them away.

271. If company incinerators are used a frame should be constructed over them from which are hung the pots or cans of water to be used for washing mess kits and kitchen utensils. If the incinerator is not used a small pit may be dug and used for this purpose. Economy of soap may be maintained by putting nail holes in a small can and dropping a piece of soap into it; when soapy water is desired dip the can into the pan or dish of water a few times, then take it out and hang it on a nail. The soap remains in the can.

272. He should always bring some nails, a hammer, a saw, and some small rope to camp; they will be found useful. A rack consisting of a couple of cord wood lengths set vertically into the ground with a board nailed to the sides near their top ends, nails driven into the board, will be found convenient to hang kitchen utensils on. Some kind of an improvised table should be constructed from which to serve food. This should be made of boards if any are to be had, or of a box, or of some poles. It need only be a rough affair, but a kitchen can hardly do without it.

273. An improvised ice box should be constructed. (See Chapter 4 under Captain.)

A can or water bag of drinking water should be kept handy for use of the men, with a dipper put into it and tied to it with a light chain or a piece of rope about 2 feet long. Men should be required to bring their own cups when desiring to drink, using the dipper to fill the cup. The ice furnished is only sufficient to preserve the meat and none should be used for drinking water: if ice is desired for such purposes it should be purchased from the company fund.

The Sergeant

274. He should be familiar with his particular duties, whatever they may be. He should, by his soldierly qualities and personal neatness, be an example to those subordinate to him in rank and should endeavor to win their respect.

275. He should be able to make a rough road sketch and a position sketch. If mounted he should be familiar with horses, their care, and the care of horse equipment. He should be a good drill master, and, in general, be able to handle men. He should be a man upon whom reliance can be placed to use good judgment when it is required.

276. He should read over that portion of this book which deals with the duties of the First Sergeant and he should be able to perform those duties when required to do so.

The Corporal

277. He may be called the father of his squad. He should be selected from high grade privates, for his soldierly bearing and qualities, and for his promising ability to become a good sergeant.

He should instruct and lead his squad, see that his men care for their arms and equipments properly, and in general supervise his squad in all that pertains to the duties of the individual members. When given a piece of work to do he should see that it is done properly before leaving it or dismissing his detail.

278. He should learn the duties of the Sergeant and should be able to perform them when required to do so.

The Private

279. He is the man upon whom the Army relies to win its battles. He should perform his duties in a willing and soldierly manner. He should, by his soldierly character and behavior, earn the respect and confidence of his superiors and pave the way for future promotion. He should always do his work to the best of his ability. When on a detail he should not leave it until dismissed by the officer or non-commissioned officer in charge.

CHAPTER VI

SUBSISTENCE OF TROOPS IN THE FIELD

What One Ration Is

280. One ration is the allowance of subsistence for one man for one day.

The present ration is the result of many years of trial and experience in subsisting soldiers. Certain articles of food which are nutritious, economical, easy of procurement and which afford variety have been determined upon, the amounts necessary to subsist one man for one day have been ascertained, and these articles and amounts have been consolidated into what is known as the ration, subdivided into its "component parts" and their "substitutive equivalents."

281. The components are the basic articles of the ration, the substitutive equivalents are those articles which may be procured in lieu of a component.

How Rations Are Procured

282. Upon receipt of a properly approved ration return the Supply Officer will credit an organization with a certain amount of money. This amount is determined by multiplying the total number of rations called for on the ration return by the money value of one ration.

283. Against this credit the organization may draw any article or articles of food which the Supply Officer has in stock, whether they be *ration articles* or not (unless rations are furnished "in kind," in which case no selection is permitted). When this credit is exhausted no more rations can be procured by that organization unless it submits another approved ration return or pays cash for the articles desired.

The Different Rations, Composition and When Used

284. Only four rations need be considered; they are the garrison, travel, reserve, and emergency rations. The composition of these different rations is shown, consolidated, in the ration conversion table, paragraph 295. The component is given in capital type, the substitutive equivalents in small type. The

numbers given under the columns headed "Rations to Units (one ration)" shows how much of that article one ration is composed of, and is in terms of the unit for that particular article as given in the column headed "Unit." For example, under "Rations to Units" on a line with "beef" is 1.25; this means that one ration of fresh beef is 1.25 *pounds*. It will be noticed that there is no fresh beef in the Travel or Reserve rations.

285. Troops are not allowed to save on the ration and procure the same ration articles elsewhere.

286. GARRISON RATION. The habitual and most elastic ration.

Composition as given in the Ration Conversion Table, paragraph 295.

Intended for troops whenever practicable in time of peace, also in time of war, except for those beyond the advance depots.

Value of the ration varies.

Canned meat is furnished when impracticable to furnish fresh meat. Turkey dressed and drawn is furnished on Thanksgiving Day and Christmas when practicable, allowance 16 ounces.

Hard bread to be ordered issued only when the interests of the government so require.

Onions in lieu of equal quantity of potatoes, but not exceeding 20% of total issue. Tomatoes, canned, in lieu of equal quantity of potatoes, but not exceeding 20% of total issue. Other fresh vegetables (not canned) when they can be obtained in the vicinity or transported in a wholesome condition from a distance in lieu of an equal quantity of potatoes, but not exceeding 30% of the total issue.

Jam in lieu of an equal quantity of prunes, but not exceeding 50% of the total issue.

Pickles, cucumber, in lieu of an equal quantity of vinegar, but not exceeding 50% of the total issue.

In adjusting charges against enlisted men and others on account of the increased cost to the Government for their subsistence the value of the ration will be estimated at 25 cents.

287. TRAVEL RATION. Composition as given in the Ration Conversion Table, paragraph 295.

Intended for troops traveling, other than by marching, and separated from their cooking facilities.

Troops may draw any article of subsistence against the money value of the ration.

When 21 cents per man per day coffee money is paid the coffee, sugar, and milk components will not be included when computing the travel ration.

Cost of this ration, without coffee money, about 40 cents per ration. Cost when coffee money is paid, about 60 cents.

Travel rations should not be issued for a journey of more than 24 hours when it can be avoided, nor should they be issued to a detachment of fewer than 3 men. For journeys involving 1 meal, cooked rations should be furnished from the rations supplied to the organization previously.

288. RESERVE RATION. Composition as given in the Ration Conversion Table, paragraph 295; or one of the standard types of ration, depending on transportation facilities.

Intended for troops beyond the advance depots.

In certain instances the Commanding General may augment this ration with supplies procured locally; see *Army Regulations*.

No money value credit is given for this ration, the actual articles are issued to the organization.

289. EMERGENCY RATION. Issued in hermetically sealed cans. Furnished in addition to the regular ration, as required, for troops in active campaign or in the field for instruction purposes. They will not be opened except by order of an officer or in extremity, nor used when regular rations are obtainable (except when ordered for purposes of instruction).

The company or detachment commander in signing a ration return (except Field Form No. 3 for Field Ration Return for Haversack Rations) signs a certificate concerning the care and use of this ration. Company and detachment commanders are responsible for the proper care and use of the Emergency rations carried on the person of the soldier. If persons responsible for these rations lose, destroy, or open them without authority the value of the rations so lost, destroyed, or opened will be charged against that person on the pay roll of his organization or detachment. The label on the tin gives direction for cooking this ration.

290. SIMPLEST EFFICIENT RATION. Not a regular ration. Bacon, hard bread, coffee, compose the simplest ration upon which men can subsist when necessary.

291. COOKED RATIONS. Not in the sense "a ration." For a meal on a train, or not to exceed two if possible, a cooked meal should be supplied by the cooks of the organization or

detachment which is to use this ration. The food for this meal is part of that drawn on a previous ration return. This is termed "cooked rations." Money for liquid coffee should be supplied from the company fund if there is a fund.

Ration Periods, by Whom Designated

292. The ration periods, for which ration returns are to be submitted, are designated by the Commanding Officer. He also designated the kind of rations to be used. By "Commanding Officer" is meant the commander of the entire camp, maneuver, field army, etc., not individual organization commanding officers.

Extra Issue Articles

Table No. 1

293. The following articles may be obtained from the Commissary on a ration return in accordance with conditions under "Remarks":

ARTICLES.	REMARKS.
Candles	When illumination is not furnished by Quartermaster. For each ration, 0.24 oz., (6 candles=1 lb). In the field to headquarters, hospitals depots of supply, telegraph stations—such quantities as commanding officer may order.
Candles, Lantern ..	To be used with Q. M. lanterns. Such quantities as commanding officer may order. (10 candles=1 lb.)
Flour	For paste in target practice. Each troop or company 50 lbs. Each battery Field Artillery 100 lbs.
Ice	To each ration, 4 lbs. per man up to and including 25 men. Maximum allowance to any organization or det. of less than 100 men to be 100 lbs. per day. For more than 100 men 1 lb. per man per day.
Matches	Such quantities as commanding officer may order as necessary.
Soap	For each ration, 0.64 oz.
Salt, rock	For each public animal, 0.8 ounce per day.
Toilet paper	When supplied, 1000 sheets for each 60 rations.
Vinegar	For each public animal, 0.1 gill per day.

Net Contents of Various Packages

294.

Table No. 2

ARTICLES.	PACKAGE.	NET CONTENTS.
Beef, corned	2 pound can.....	2 pounds
Beef, corned	No. 2 can.....	1½ pounds
Beef, roast	2 pound can.....	2 pounds
Beef roast	No. 2 can.....	1½ pounds
Baking powder	No. ½ can.....	½ pound
Beans, baked	No. 1 can.....	10 ounces
Beans, baked	No. 3 can.....	2 pounds
Fish, canned (salmon).....	No. 1 can.....	1 pound
Hash, corned beef	2 pound can.....	2 pounds
Hash, corned beef	No. 2 can.....	1½ pounds
Jam	No. 2 can.....	1 lb. 9.2 oz.
Lard	No. 5 pail.....	4.16 pounds
Lard	5 lb. pail.....	5 pounds
Milk, evaporated	Family can	12 ounces
Milk, evaporated	Hotel can	2 pounds
*Milk, evaporated	16 oz. can.....	1 pound
Pepper	No. ¼ can.....	¼ pound
Potatoes, canned	30 oz. can.....	30 oz. (1 lb. 14 oz.)
Spices	No. ¼ can.....	¼ pound
Tomatoes, canned	No. 2½ can.....	2 pounds
Tomatoes, canned	No. 3 can.....	2 pounds
Tomatoes, canned	No. 10 can.....	6 lbs. 8 oz.
Extract, flavoring	2 oz. bottle.....	2 ounces
Extract, flavoring	8 oz. bottle.....	8 ounces
Turkey, dressed and undrawn.	Pound	19 ounces
Turkey, dressed and drawn...	Pound	16 ounces

*Can habitually issued.

Ration Conversion Table

295.

Table No. 3

ARTICLE.	UNIT.	GARRISON		TRAVEL		RESERVE	
		Rations to Units. (1 rtn.)	Units to Rations.	Rations to Units (1 rtn.)	Units to Rations.	Rations to Units. (1 rtn.)	Units to Rations.
BEEF, FRESH...	Pound	1.25	0.8	.....	.....	.....	.....
Mutton, fresh	Pound	1.25	0.8	.....	.....	.....	.....
Bacon	Pound	0.75	1.3333	.....	.....	0.75	1.3333
Beef, corned	2 lb. can	0.5	2.0	0.375	2.6667	.....	.....
Beef, roast	2 lb. can	0.5	2.0	.....	.....	.....	.....
Hash, corned beef	2 lb. can	0.5	2.0	.....	.....	.....	.....
Beef, corned	No. 2 can	0.6667	1.5	0.375	2.6667	.....	.....
Beef, roast	No. 2 can	0.6667	1.5	0.5	2	.....	.....
Hash, corned beef	No. 2 can	0.6667	1.5	.....	.....	.....	.....
Fish, dried	Pound	0.875	1.1428	0.5	2	.....	.....
Fish, pickled	Pound	1.125	0.8889	.....	.....	.....	.....
Fish, canned	No. 1 can	1	1	.....	.....	.....	.....
Chicken, dressed	Pound	1	1	.....	.....	.....	.....
Turkey, dressed	Pound	1	1	.....	.....	.....	.....
FLOUR	Pound	1.125	0.8889	.....	.....	.....	.....
Soft bread	Pound	1.125	0.8889	.....	.....	.....	.....
Hard bread	Pound	1	1	1.125	0.8889	.....	.....
Corn meal	Pound	1.25	0.8	1	1	.....	1
BK. POWDER	No. ½ can	.....	0.01	.....	.....	.....	.....
BEANS, DRIED	Pound	0.15	6.6667	100.	.....	.....	.....
Beans, baked	No. 1 can	.....	.....	.....	.....	.....	.....
Beans, baked	No. 3 can	.....	.....	0.4	2.5	.....	.....
Rice	Pound	0.1	10	0.125	8	.....	.....
Hominy	Pound	0.1	10	.....	.....	.....	.....
POTATOES, FR...	Pound	1.25	0.8	.....	.....	.....	.....
Onions, fresh	Pound	1.25	0.8	.....	.....	.....	.....
Other fresh vegetables	Pound	1.25	0.8	.....	.....	.....	.....
Potatoes, canned	Pound	0.9375	1.06667	.....	.....	.....	.....

Table No. 3 (Continued)

Potatoes, canned ..	30 oz. can	0.5	2	.....	.....	.....	.....
Tomatoes, canned ..	Pound	1.25	0.8	.....	.....	.....	.....
Tomatoes, canned ..	No. 2½ can	0.625	1.6	.....	4.0	.....	.....
Tomatoes, canned ..	No. 3 can	0.625	1.6	.....	4.0	.....	.....
Tomatoes, canned ..	No. 10 can	0.1923	5.2	.....	13	.....	.....
PRUNES	Pound	0.08	12.5	.....	.....	.....	.....
Apples or peaches evaporated	Pound	0.08	12.5	.....	.....	.....	.....
Jam	Pound	0.08	12.5	.....	.....	.....	.....
Jam	No. 2 can	0.05079	19.6875	.....	18	.....	.....
COFFEE, R. & G. ..	Pound	0.07	14.2857	.....	14.2857	0.07	14.2857
Coffee, R. not G. ..	Pound	0.07	14.2857	.....	.....	.....	.....
Tea, black or green ..	Pound	0.02	50	.....	.....	.....	.....
Coffee. green	Pound	0.0875	11.4286	.....	.....	.....	.....
SUGAR	Pound	0.2	5	.....	6.6667	0.15	6.6667
MILK, EVAPOR. ..	Pound	0.03125	32	.....	32	.....	.....
Milk, evaporated ..	Family can	0.04167	24	.....	24	.....	.....
Milk, evaporated ..	Hotel can	0.01562	64	.....	64	.....	.....
VINEGAR	Gallon	0.005	200	.....	.....	.....	.....
Pickles	Gallon	0.005	200	.....	.....	.....	.....
SALT	Pound	0.04	25	.....	.....	0.01	100
PEPPER, BLACK	Pound	0.0025	400	.....	.....	0.00125	800
Pepper, black	No. ¼ can	0.01	100	.....	.....	0.005	200
CINNAMON	No. ¼ can	0.0035	285.714	.....	.....	.....	.....
Cloves	No. ¼ can	0.0035	285.714	.....	.....	.....	.....
Ginger	No. ¼ can	0.0035	285.714	.....	.....	.....	.....
Nutmeg	No. ¼ can	0.0035	285.714	.....	.....	.....	.....
Nutmeg	Pound	0.000875	1142.875	.....	.....	.....	.....
LARD	Pound	0.04	25	.....	.....	.....	.....
Lard	No. 5 Pail	0.00961	104	.....	.....	.....	.....
BUTTER	Pound	0.03125	32	.....	.....	.....	.....
Oleomargarine ..	Pound	0.03125	32	.....	.....	.....	.....
SYRUP	Gallon	0.01	100	.....	.....	.....	.....
FLAVOR, LEMON. ..	2 oz. Bottle	0.007	142.8571	.....	.....	.....	.....
Flavor, vanilla	2 oz. Bottle	0.007	142.8571	.....	.....	.....	.....
Flavor, lemon	8 oz. Bottle	0.00175	571.42857	.....	.....	.....	.....
Flavor, vanilla	8 oz. Bottle	0.00175	571.42857	.....	.....	.....	.....

Explanation of Ration Conversion Table

296. The component article is given in capitals, the substitutive equivalent in small type. Under the column headed "Unit" is given the unit in which these supplies are drawn from the Commissary; for example, fresh beef is drawn in *pounds*, corned beef in *cans*, and pickles in *gallons*.

297. Under the heading Garrison, Travel, or Reserve Rations are given two columns, the first of these is headed "Rations to UNITS," and the second "Units to RATIONS," the "units" referring to those given for a particular article in the column headed "UNITS."

298. Example, "Rations to UNITS."

An organization commander decides to draw, of the meat component, 70% fresh beef and 20% bacon on 400 rations. How many pounds of each shall he ask for, Garrison ration to be used?

Solution: 70% of 400 = 280 rations of beef.

20% of 400 = 80 rations of bacon.

Under the heading "Rations to UNITS" (Garrison) and opposite "beef, fresh," we have 1.25. Multiply the 280 by this number, the result is 350. This 350 is UNITS and the unit for fresh beef is the pound, hence 350 pounds of fresh beef. Similarly, $80 \text{ rations} \times 0.75 = 60$ (units) pounds of bacon.

299. Example, "Units to RATIONS."

An organization commander, to check his mess sergeant, weighs the sacks of potatoes drawn by the sergeant and finds he has 400 *pounds* (units) of potatoes. How many rations of potatoes did the Sergeant draw, garrison ration?

Solution:

Under the heading, "Units to RATIONS" (Garrison), and on the line with "potatoes, fresh," we have the number 0.8. Multiply 400 lbs. (units) by 0.8, the result is 320 *rations*. Consequently the sergeant drew 320 rations of potatoes.

300. The values in columns 1, 3, and 5 are not only multipliers but the same values are also the number of *units* of which *one* ration is composed. That is, one ration of fresh beef is 1.25 or $1\frac{1}{4}$ pounds or 20 oz.; one of bacon is .75 or $\frac{3}{4}$ of a pound or 12 oz.

Sample Menus for 10 Day Maneuver Period

301. These menus conform to the Subsistence table and are for the Garrison Ration. Milk and sugar is used with coffee each time coffee is served. Sugar only is served with tea.

Table No. 4

SAMPLE MENUS, GARRISON RATION

Day.	Breakfast.	Dinner.	Supper.
1st	Beefsteak; fried potatoes; bread; coffee.	Roast beef; brown gravy; mashed potatoes; bread; coffee.	Baked pork & beans; stewed apples; bread; coffee.
2nd	Beef stew; corn meal mush with milk and sugar; bread; coffee.	Beefsteak and gravy; boiled potatoes; bread coffee.	Canned salmon; potato salad; jam; bread; coffee.
3rd	Fried bacon; fried potatoes and onions; bread; coffee.	Roast beef; brown gravy; boiled potatoes; bread; coffee.	Baked pork & beans; stewed prunes; bread; coffee.
4th	Beef stew; bread; coffee; jam.	Bean soup; boiled beef; boiled potatoes; bread; coffee.	Cold sliced beef; boiled potatoes; boiled rice; bread; coffee.
5th	Fried bacon; fried potatoes; bread; coffee.	Beefsteak; stewed tomatoes; boiled potatoes; bread; coffee.	Canned corn beef hash; stewed prunes; bread; coffee.
6th	Beef stew; bread; coffee.	Roast beef; brown gravy; boiled potatoes; bread, coffee.	Canned salmon; stewed apples; bread; coffee.
7th	Fried bacon; fried potatoes; bread; coffee.	Rice & tomato soup; boiled beef; boiled potatoes; bread; coffee.	Baked pork & beans; jam; bread; coffee.
8th	Beefsteak; fried potatoes; fried onions; bread; coffee.	Beef stew; pickles; bread; coffee.	Cold sliced beef; fried potatoes; stewed prunes; bread; coffee.
9th	Fried bacon; fried potatoes; bread; coffee.	Baked pork & beans; stewed tomatoes; sliced onions; bread; coffee.	Canned corn beef hash; stewed tomatoes; bread; tea.
10th *	Beef stew; boiled rice; bread; coffee.	Beefsteak; mashed potatoes; bread; coffee.	Baked pork & beans; stewed apples; bread; coffee.

*Travel ration may be designated for the 10th day, in which event use either of the following menus:

SAMPLE MENUS, TRAVEL RATION

Day.	Breakfast.	Dinner.	Supper.
1st	Canned c o r n beef; jam; bread; *coffee.	Canned baked beans; c a n n e d tomatoes; bread; *coffee.	C a n n e d corn beef hash; bread; *coffee.
2nd	Canned c o r n beef hash; bread; *coffee.	Canned baked beans; jam; bread; *coffee.	Canned c o r n beef; c a n n e d tomatoes; bread; *coffee.

*Or 21 cents per man per day "coffee money" in lieu of coffee, milk, and sugar.

Table of Ingredients to Correspond with Sample Menus. Based on 40 Men

302.

Table No. 5

*ARTICLE { 1 mess for 40 men.	INGREDIENTS, PER MEAL.
Apples, stewed.	3 1/2 lbs. apples, evaporated.
Bacon, fried.	10 lbs. bacon, issue.
Bacon, in baked beans.	4 lbs. bacon.
Beef, fresh, steak.	13 1/3 lbs. beefsteak without bone or fat.
Beef, fresh, steak and onions.	13 1/3 lbs. beefsteak without bone or fat; 8 lbs. onions; 1 lb. fat; 1 1/3 lbs. beef stock.
Beef, fresh, roast.	16 2/3 lbs. beef; 2/3 quarts beef stock.
Beef, fresh, boiled.	13 1/3 lbs. beef without bone.
Beef, fresh, stew.	13 1/3 lbs. beef without bone; 6 2/3 lbs. potatoes; 1 1/3 lbs. onions; slice of bacon.
Beans, baked, with bacon.	10 lbs. beans; 2 lbs. bacon; 7 oz. sugar; 1/3 pint molasses.
Bean soup.	4 lbs. beans; 5 1/2 gal. water or beef stock; 3 1/2 lbs. soup bone; 1 lb. bacon.
Corn meal, for mush, with milk.	4 lbs. corn meal; 1 lb. sugar; 2/3 oz. salt; 2 2/3 gal. water.
Coffee.	1 1/2 lbs. coffee; 5 gallons water; 2 lbs. sugar; for first meal, 3 oz. to each gallon of water added for second meal; 2 lbs. sugar.
Flour, with gravies, etc.	Will average 2 1/5 lbs. per meal.
Gravy.	About 2 lbs. flour.
Milk, evaporated for use with breakfast food.	4 one-pound cans; 1 lb. sugar; pinch salt; in enough water to make 2 gallons.
Onions, general use for seasoning.	Average about 2 lbs.
Onions, sliced.	8 lbs.
Potatoes, boiled, mashed.	14 lbs.
Potatoes, baked or fried.	14 lbs.
Potato salad.	13 lbs. potatoes; 2/3 lb. onions; 2/3 lb. bacon; 2/3 pint of water; 2/3 pint vinegar.
Potatoes and onions fried.	14 lbs. potatoes; 3 1/3 lbs. onions.
Prunes, stewed.	3 1/3 lb. prunes; add cinnamon to taste.
Rice, boiled.	3 1/3 lbs. rice; 2 gallons water.
Rice and tomato soup.	2 cans tomatoes; 1 1/3 lbs. rice; 3 1/3 gal. beef stock.
Salmon, canned.	20 cans.
Salmon hash.	8 cans salmon; 16 2/3 lbs. potatoes.
Tea.	2 1/3 ounces tea; 5 gallons water.

* If there are 60 men multiply values by 60/40 or 1 1/2, etc.

Measuring With the Ordnance Tin Cup

303. The old issue cup holds $\frac{7}{8}$ of a quart of any liquid. The New Infy. Equipment Cup holds $\frac{3}{4}$ as much as the old issue cup, or $\frac{2}{3}$ of a quart. The following table shows the weight of one Ordnance tin cup *level full*:

Table No. 6

Article	Old Issue			New Issue		
	Lbs.	Oz	Lbs.	Lbs.	Oz.	Lbs.
Apples, evaporated ..	..	8	0.5	..	6	.375
Beans, chili	1	7	1.44	1	1	1.08
Beans, issue	1	8	1.5	1	2	1.125
Beans, kidney .. .	1	5	1.31	..	15.7	.98
Beans, lima	1	5	1.31	..	15.7	.98
Bread crumbs .....	..	15	0.94	..	11.2	.705
Coffee, R. & G.	1	4	1.25	..	15	.94
Coffee, Java, ground .	1	..	1.	..	12	.75
Coffee, Mocha, ground	1	2	1.12	..	13.5	.84
Corn, sweet, dried ...	1	..	1.	..	12	.75
Corn meal	1	4	1.25	..	15	.94
Currants	1	8	1.5	1	2	1.125
Eggs, broken	1	13	1.81	1	6	1.36
Flour	1	..	1.	..	12	.75
Hominy	1	4	1.25	..	15	.94
Milk, fresh	1	12	1.75	1	5	1.31
Oatmeal .....	..	9	0.56	..	6.75	.42
Peaches, evaporated ..	1	..	1.	..	12	.75
Peas, dried	1	8	1.5	1	2	1.125
Prunes	1	2	1.12	..	13.5	.84
Raisins	1	..	1.	..	12	.75
Rice	1	8	1.5	1	2	1.125
Salt, coarse	1	15	1.94	1	7	1.45
Salt, issue	2	..	2.	1	8	1.5
Syrup, cane	2	7	2.44	1	13	1.83
Sugar, cut loaf	1	..	1.	..	12	.75
Sugar, granulated ...	1	8	1.5	1	2	1.125
Tea, English breakfast	..	6	0.37	..	4.5	.28
Tea, Oolong .....	..	7	0.44	..	5	.33
Tea, Young Hyson ..	..	10	0.625	..	7.5	.469

Use of the Sample Menus

304. Ordinarily it may not be possible to follow the menus in the *exact* order in which they are given, due to the fact that the cuts of fresh beef must be received as issued by the Commissary. It will usually be possible, however, to substitute one entire day for another. When this is done confine such exchange

of days to the period in which those particular rations are drawn, that is, do not substitute the seventh day for the second, the menus being arranged on the supposition that two periods of five days each are to be rationed for. These menus conform strictly to the Subsistence Table, being derived from that table.

In the event of travel rations being used procure the full allowance of the travel ration, taking 50% canned corn beef and 50% canned corn beef hash, then follow the travel ration menus. Make no savings on this ration.

How to Prepare Menus

305. After an organization commander has understood how to handle the ration and the menus here given he should prepare his own, then instruct his officers and mess sergeant in doing likewise.

The first thing to do in preparing menus for meals is to decide *what* the men are to be given to eat. This necessitates apportioning the different articles of the ration among the correct number of meals, and can most easily be obtained by consulting the percentages given in columns 6, 8, and 10 of the Subsistence Table, and, by taking such percentage of the *total* number of rations that are to be drawn, the number of *rations* of each article can be found. Having ascertained how many rations of each article should be used, convert these *rations* to *units* by means of the "Conversion Table." This, then, gives the proper proportion of the various articles, and this proportion is in pounds, cans, bottles, gallons, etc., in other words, in *units*, and consequently in such form as to be readily handled.

306. The next thing to do is to decide with how many meals each article is to be used. This necessitates a knowledge as to how much of that article one man will eat for one meal, and this is found in column 13. Having determined how much to cook for one man for one meal multiply this figure by the total number of men that are to be fed and who are entitled to rations. This will give the amount of that particular article to cook for *one meal for the entire company*, and it will be given in the units appearing in column 2 of the Subsistence Table.

Example:

Suppose 36 men (average) are to be fed, and it is desired to know how much bacon to allow for a meal.

36 (men) \times 0.25 (from column 13 on line bacon) = 9 lbs. bacon. *Pounds* because that is the unit. Now, if (as explained concerning the percentages in columns 6 and 10) the company has actually drawn 54 lbs. of bacon and 9 lbs. are to be used for one meal it is evident that the bacon will last the company for 6 meals. Thus figures will be obtained similar to those in column 11.

If 6 messes of bacon can be used on the bacon allowance, and so many messes of each of the articles, it is a simple matter to divide these messes of different articles among the different meals of the various days, providing, for instance, that when so many messes of baked beans are decided upon it be remembered that bacon is cooked with these beans and that 6 messes of bacon cannot all be used for bacon meals alone.

How to Use the Table of Proportionate Multipliers

307. This table is intended to be used with the Subsistence Table and is in accordance with the Table of Sample Maneuver Menus. The top line represents the number of DAYS for which an organization is to draw rations. The left hand vertical represents the number of MEN to be subsisted for that number of days. The numbers in the body of the table are the MULTIPLIERS to be used in conjunction with columns 3, 4, 5, 7, 9, and 12 of the Subsistence Table. The use of the multipliers is described in the description of that table.

308. *How to find the proper multiplier:*

Suppose 36 men are to be rationed for 9 days.

Run down the column headed "MEN" to "36," and horizontally along that line to its intersection with column headed "9" (days). The figure .81 will be found at this intersection. .81 is the proper multiplier to use with the values given in the Subsistence Table.

If it is desired to find a multiplier for a number of men or days *greater* than given in this table, proceed as follows:

Case 1. To find the multiplier for 121 men for 16 days:

Multiplier for 100 men for 16 days 4.

Multiplier for 21 men for 16 days .84

Multiplier for 121 men for 16 days $4.84 =$ desired
[multiplier.]

Case 2. To find the multiplier for 78 men for 26 days:

Multiplier for 78 men for 20 days 3.9

Multiplier for 78 men for 6 days 1.17

Multiplier for 78 men for 26 days 5.07 = desired
[multiplier.

Case 3. To find the multiplier for 136 men for 28 days:

Multiplier for 100 men for 20 days 5.

Multiplier for 36 men for 20 days 1.8

Multiplier for 100 men for 8 days 2.

Multiplier for 36 men for 8 days 0.72

Multiplier for 136 men for 28 days 9.52 = desired
[multiplier.

Table of Proportionate Multipliers to be Used with Subsistence
Table. Is Applicable to Columns 3, 4, 5, 7, 9, and 12

309.

Table No. 7

MEN	DAYS					
	1	2	3	4	5	6
1	.0025	.005	.0075	.01	.0125	.015
2	.005	.01	.015	.02	.025	.03
3	.0075	.015	.0225	.03	.0375	.045
4	.01	.02	.03	.04	.05	.06
5	.0125	.025	.0375	.05	.0625	.075
6	.015	.03	.045	.06	.075	.09
7	.0175	.035	.0525	.07	.0875	.105
8	.02	.04	.06	.08	.1	.12
9	.0225	.045	.0675	.09	.1125	.135
10	.025	.05	.075	.1	.125	.15
11	.0275	.055	.0825	.11	.1375	.165
12	.03	.06	.09	.12	.15	.18
13	.0325	.065	.0975	.13	.1625	.195
14	.035	.07	.105	.14	.175	.21
15	.0375	.075	.1125	.15	.1875	.225
16	.04	.08	.12	.16	.2	.24
17	.0425	.085	.1275	.17	.2125	.255
18	.045	.09	.135	.18	.225	.27
19	.0475	.095	.1425	.19	.2375	.285
20	.05	.1	.15	.2	.25	.3
21	.0525	.105	.1575	.21	.2625	.315
22	.055	.11	.165	.22	.275	.33
23	.0575	.115	.1725	.23	.2875	.345
24	.06	.12	.18	.24	.3	.36
25	.0625	.125	.1875	.25	.3125	.375
26	.065	.13	.195	.26	.325	.39
27	.0675	.135	.2025	.27	.3375	.405
28	.07	.14	.21	.28	.35	.42
29	.0725	.145	.2175	.29	.3625	.435
30	.075	.15	.225	.3	.375	.45
31	.0775	.155	.2325	.31	.3875	.465
32	.08	.16	.24	.32	.4	.48
33	.0825	.165	.2475	.33	.4125	.495
34	.085	.17	.255	.34	.425	.51
35	.0875	.175	.2625	.35	.4375	.525
36	.09	.18	.27	.36	.45	.54
37	.0925	.185	.2775	.37	.4625	.555
38	.095	.19	.285	.38	.475	.57
39	.0975	.195	.2925	.39	.4875	.585
40	.1	.2	.3	.4	.5	.6
41	.1025	.205	.3075	.41	.5125	.615
42	.105	.21	.315	.42	.525	.63
43	.1075	.215	.3225	.43	.5375	.645
44	.11	.22	.33	.44	.55	.66
45	.1125	.225	.3375	.45	.5625	.675
46	.115	.23	.345	.46	.575	.69
47	.1175	.235	.3525	.47	.5875	.705
48	.12	.24	.36	.48	.6	.72

SUBSISTENCE OF TROOPS

Table No. 7 (Continued)

MEN	DAYS					
	1	2	3	4	5	6
49	.1225	.245	.3675	.49	.6125	.735
50	.125	.25	.375	.5	.625	.75
51	.1275	.255	.3825	.51	.6375	.765
52	.13	.26	.39	.52	.65	.78
53	.1325	.265	.3975	.53	.6625	.795
54	.135	.27	.405	.54	.675	.81
55	.1375	.275	.4125	.55	.6875	.825
56	.14	.28	.42	.56	.7	.84
57	.1425	.285	.4275	.57	.7125	.855
58	.145	.29	.435	.58	.725	.87
59	.1475	.295	.4425	.59	.7375	.885
60	.15	.3	.45	.6	.75	.9
61	.1525	.305	.4575	.61	.7625	.915
62	.155	.31	.465	.62	.775	.93
63	.1575	.315	.4725	.63	.7875	.945
64	.16	.32	.48	.64	.8	.96
65	.1625	.325	.4875	.65	.8125	.975
66	.165	.33	.495	.66	.825	.99
67	.1675	.335	.5025	.67	.8375	1.005
68	.17	.34	.51	.68	.85	1.02
69	.1725	.345	.5175	.69	.8625	1.035
70	.175	.35	.525	.7	.875	1.05
71	.1775	.355	.5325	.71	.8875	1.065
72	.18	.36	.54	.72	.9	1.08
73	.1825	.365	.5475	.73	.9125	1.095
74	.185	.37	.555	.74	.925	1.11
75	.1875	.375	.5625	.75	.9375	1.125
76	.19	.38	.57	.76	.95	1.14
77	.1925	.385	.5775	.77	.9625	1.155
78	.195	.39	.585	.78	.975	1.17
79	.1975	.395	.5925	.79	.9875	1.185
80	.2	.4	.6	.8	1.	1.2
81	.2025	.405	.6075	.81	1.0125	1.215
82	.205	.41	.615	.82	1.025	1.23
83	.2075	.415	.6225	.83	1.0375	1.245
84	.21	.42	.63	.84	1.05	1.26
85	.2125	.425	.6375	.85	1.0625	1.275
86	.215	.43	.645	.86	1.075	1.29
87	.2175	.435	.6525	.87	1.0875	1.305
88	.22	.44	.66	.88	1.10	1.32
89	.2225	.445	.6675	.89	1.1125	1.335
90	.225	.45	.675	.9	1.125	1.35
91	.2275	.455	.6825	.91	1.1375	1.365
92	.23	.46	.69	.92	1.15	1.38
93	.2325	.465	.6975	.93	1.1625	1.395
94	.235	.47	.705	.94	1.175	1.41
95	.2375	.475	.7125	.95	1.1875	1.425
96	.2457	.48	.72	.96	1.2	1.44
97	.2455	.485	.7275	.97	1.2125	1.455
98	.245	.49	.735	.98	1.225	1.47
99	.2475	.495	.7425	.99	1.2375	1.485
100	.25	.5	.75	1.	1.25	1.5

Table No. 7 (Continued)

MEN	DAYS						
	7	8	9	10	11	12	13
1	.0175	.02	.0225	.025	.0275	.03	.0325
2	.035	.04	.045	.05	.055	.06	.065
3	.0525	.06	.0675	.075	.0825	.09	.0957
4	.07	.08	.09	.1	.11	.12	.13
5	.0875	.1	.1125	.125	.1375	.15	.1625
6	.105	.12	.135	.15	.165	.18	.195
7	.1225	.14	.1575	.175	.1925	.21	.2275
8	.14	.16	.18	.2	.22	.24	.26
9	.1575	.18	.2025	.225	.2475	.27	.2925
10	.175	.2	.225	.25	.275	.3	.325
11	.1925	.22	.2475	.275	.3025	.33	.3575
12	.21	.24	.27	.3	.33	.36	.39
13	.2275	.26	.2925	.325	.3575	.39	.4225
14	.245	.28	.315	.35	.385	.42	.455
15	.2625	.3	.3375	.375	.4125	.45	.4875
16	.28	.32	.36	.4	.44	.48	.52
17	.2975	.34	.3825	.425	.4675	.51	.5525
18	.315	.36	.405	.45	.495	.54	.585
19	.3325	.38	.4275	.475	.5225	.57	.6175
20	.35	.4	.45	.5	.55	.6	.65
21	.3675	.42	.4725	.525	.575	.63	.6825
22	.385	.44	.495	.55	.605	.66	.715
23	.4025	.46	.5175	.575	.6325	.69	.7475
24	.42	.48	.54	.6	.66	.72	.78
25	.4375	.5	.5625	.625	.6875	.75	.8125
26	.455	.52	.585	.65	.715	.78	.845
27	.4725	.54	.6075	.675	.7425	.81	.8775
28	.49	.56	.63	.7	.77	.84	.91
29	.5075	.58	.6525	.725	.7975	.87	.9425
30	.525	.6	.675	.75	.825	.9	.975
31	.5425	.62	.6975	.775	.8525	.93	1.0075
32	.56	.64	.72	.8	.88	.96	1.04
33	.5775	.66	.7425	.825	.9075	.99	1.0725
34	.595	.68	.765	.85	.935	1.02	1.105
35	.6125	.7	.7875	.875	.9625	1.05	1.1375
36	.63	.72	.81	.9	.99	1.08	1.17
37	.6475	.74	.8325	.925	1.0175	1.11	1.2025
38	.665	.76	.855	.95	1.045	1.14	1.235
39	.6825	.78	.8775	.975	1.0725	1.17	1.2675
40	.7	.8	.9	1.	1.1	1.2	1.3
41	.7175	.82	.9225	1.025	1.1275	1.23	1.3325
42	.735	.84	.945	1.05	1.155	1.26	1.365
43	.7525	.86	.9675	1.075	1.1825	1.29	1.3975
44	.77	.88	.99	1.1	1.21	1.32	1.43
45	.7875	.9	1.0125	1.125	1.2375	1.35	1.4625
46	.805	.92	1.035	1.15	1.265	1.38	1.495
47	.8225	.94	1.0575	1.175	1.2925	1.41	1.5275
48	.84	.96	1.08	1.2	1.32	1.44	1.56
49	.8575	.98	1.1025	1.225	1.3475	1.47	1.5925
50	.875	1.	1.125	1.25	1.375	1.5	1.625

SUBSISTENCE OF TROOPS

Table No. 7 (Continued)

MEN	DAYS						
	7	8	9	10	11	12	13
51	.8925	1.02	1.1475	1.275	1.4025	1.53	1.6575
52	.91	1.04	1.17	1.3	1.43	1.56	1.69
53	.9275	1.06	1.1925	1.325	1.4575	1.59	1.7225
54	.945	1.08	1.215	1.35	1.485	1.62	1.755
55	.9625	1.1	1.2375	1.375	1.5125	1.65	1.7875
56	.98	1.12	1.26	1.4	1.54	1.68	1.82
57	.9975	1.14	1.2825	1.425	1.5675	1.71	1.8525
58	1.015	1.16	1.305	1.45	1.595	1.74	1.885
59	1.0325	1.18	1.3275	1.475	1.6225	1.77	1.9175
60	1.05	1.2	1.35	1.5	1.65	1.8	1.95
61	1.0675	1.22	1.3725	1.525	1.6775	1.83	1.9825
62	1.085	1.24	1.395	1.55	1.705	1.86	2.015
63	1.1025	1.26	1.4175	1.575	1.7325	1.89	2.0475
64	1.12	1.28	1.44	1.6	1.76	1.92	2.08
65	1.1375	1.3	1.4625	1.625	1.7875	1.95	2.1125
66	1.155	1.32	1.485	1.65	1.815	1.98	2.145
67	1.1725	1.34	1.5075	1.675	1.8425	2.01	2.1775
68	1.19	1.36	1.53	1.7	1.87	2.04	2.21
69	1.2075	1.38	1.5525	1.725	1.8975	2.07	2.2425
70	1.225	1.4	1.575	1.75	1.925	2.1	2.275
71	1.2425	1.42	1.5975	1.775	1.9525	2.13	2.3075
72	1.26	1.44	1.62	1.8	1.98	2.16	2.34
73	1.2775	1.46	1.6425	1.825	2.0075	2.19	2.3725
74	1.295	1.48	1.665	1.85	2.035	2.22	2.405
75	1.3125	1.5	1.6875	1.875	2.0625	2.25	2.4375
76	1.33	1.52	1.71	1.9	2.09	2.28	2.47
77	1.3475	1.54	1.7325	1.925	2.1175	2.31	2.5025
78	1.365	1.56	1.755	1.95	2.145	2.34	2.535
79	1.3825	1.58	1.7775	1.975	2.1725	2.37	2.5675
80	1.4	1.6	1.8	2.	2.2	2.4	2.6
81	1.4175	1.62	1.8225	2.025	2.2275	2.43	2.6325
82	1.435	1.64	1.845	2.05	2.255	2.46	2.665
83	1.4525	1.66	1.8675	2.075	2.2825	2.49	2.6975
84	1.47	1.68	1.89	2.1	2.31	2.52	2.73
85	1.4875	1.7	1.9125	2.125	2.3375	2.55	2.7625
86	1.505	1.72	1.935	2.15	2.365	2.58	2.795
87	1.5225	1.74	1.9575	2.175	2.3925	2.61	2.8275
88	1.54	1.76	1.98	2.2	2.42	2.64	2.86
89	1.5575	1.78	2.0025	2.225	2.4475	2.67	2.8925
90	1.575	1.8	2.025	2.25	2.475	2.7	2.925
91	1.5925	1.82	2.0475	2.275	2.5025	2.73	2.9575
92	1.61	1.84	2.07	2.3	2.53	2.76	2.99
93	1.6275	1.86	2.0925	2.325	2.5575	2.79	3.0225
94	1.645	1.88	2.115	2.35	2.585	2.82	3.055
95	1.6625	1.9	2.1375	2.375	2.6125	2.85	3.0875
96	1.68	1.92	2.16	2.4	2.64	2.88	3.12
97	1.6975	1.94	2.1825	2.425	2.6675	2.91	3.1525
98	1.715	1.96	2.205	2.45	2.695	2.94	3.185
99	1.7325	1.98	2.2275	2.475	2.7225	2.97	3.2175
100	1.75	2.	2.25	2.5	2.75	3.	3.25

Table No. 7 (Continued)

MEN	DAYS						
	14	15	16	17	18	19	20
1	.035	.0375	.04	.0425	.045	.0475	.05
2	.07	.075	.08	.085	.09	.095	.1
3	.105	.1125	.12	.1275	.135	.1425	.15
4	.14	.15	.16	.17	.18	.19	.2
5	.175	.1875	.2	.2125	.225	.2375	.25
6	.21	.225	.24	.255	.27	.285	.3
7	.245	.2625	.28	.2975	.315	.3325	.35
8	.28	.3	.32	.34	.36	.38	.4
9	.315	.3375	.36	.3825	.405	.4275	.45
10	.35	.375	.4	.425	.45	.475	.5
11	.385	.4125	.44	.4675	.495	.5225	.55
12	.42	.45	.48	.51	.54	.57	.6
13	.455	.4875	.52	.5525	.585	.6175	.65
14	.49	.525	.56	.595	.63	.665	.7
15	.525	.5625	.6	.6375	.675	.7125	.75
16	.56	.6	.64	.68	.72	.76	.8
17	.595	.6375	.68	.7225	.765	.8075	.85
18	.63	.675	.72	.765	.81	.855	.9
19	.665	.7125	.76	.8075	.855	.9025	.95
20	.7	.75	.8	.85	.9	.95	1.
21	.735	.7875	.84	.8925	.945	.9975	1.05
22	.77	.825	.88	.935	.99	1.045	1.1
23	.805	.8625	.92	.9775	1.035	1.0925	1.15
24	.84	.9	.96	1.02	1.08	1.14	1.2
25	.875	.9375	1	1.0625	1.125	1.1875	1.25
26	.91	.975	1.04	1.105	1.17	1.235	1.3
27	.945	1.0125	1.08	1.1475	1.215	1.2825	1.35
28	.98	1.05	1.12	1.19	1.26	1.33	1.4
29	1.015	1.0875	1.16	1.2325	1.305	1.3775	1.45
30	1.05	1.125	1.2	1.275	1.35	1.425	1.5
31	1.085	1.1625	1.24	1.3175	1.395	1.4725	1.55
32	1.12	1.2	1.28	1.36	1.44	1.52	1.6
33	1.155	1.2375	1.32	1.4025	1.485	1.5675	1.65
34	1.19	1.275	1.36	1.445	1.53	1.615	1.7
35	1.225	1.3125	1.4	1.4875	1.575	1.6625	1.75
36	1.26	1.35	1.44	1.53	1.62	1.71	1.8
37	1.295	1.3875	1.48	1.5725	1.665	1.7575	1.85
38	1.33	1.425	1.52	1.615	1.71	1.805	1.9
39	1.365	1.4625	1.56	1.6575	1.755	1.8525	1.95
40	1.4	1.5	1.6	1.7	1.8	1.9	2.
41	1.435	1.5375	1.64	1.7425	1.845	1.9475	2.05
42	1.47	1.575	1.68	1.785	1.89	1.995	2.1
43	1.505	1.6125	1.72	1.8275	1.935	2.0425	2.15
44	1.54	1.65	1.76	1.87	1.98	2.09	2.2
45	1.575	1.6875	1.8	1.9125	2.025	2.1375	2.25
46	1.61	1.725	1.84	1.955	2.07	2.185	2.3
47	1.645	1.7625	1.88	1.9975	2.115	2.2325	2.35
48	1.68	1.8	1.92	2.04	2.16	2.28	2.4
49	1.715	1.8375	1.96	2.0825	2.205	2.3275	2.45
50	1.75	1.875	2.	2.125	2.25	2.375	2.5

SUBSISTENCE OF TROOPS

Table No. 7 (Continued)

MEN	DAYS						
	14	15	16	17	18	19	20
51	1.785	1.9125	2.04	2.1675	2.295	2.4225	2.55
52	1.82	1.95	2.08	2.21	2.34	2.47	2.6
53	1.855	1.9875	2.12	2.2525	2.385	2.5175	2.65
54	1.89	2.025	2.16	2.295	2.43	2.565	2.7
55	1.925	2.0625	2.2	2.3375	2.475	2.6125	2.75
56	1.96	2.1	2.24	2.38	2.52	2.66	2.8
57	1.995	2.1375	2.28	2.4225	2.565	2.7075	2.85
58	2.03	2.175	2.32	2.465	2.61	2.755	2.9
59	2.065	2.2125	2.36	2.5075	2.655	2.8025	2.95
60	2.1	2.25	2.4	2.55	2.7	2.85	3.
61	2.135	2.2875	2.44	2.5925	2.745	2.8975	3.05
62	2.17	2.325	2.48	2.635	2.79	2.945	3.1
63	2.205	2.3625	2.52	2.6775	2.835	2.9925	3.15
64	2.24	2.4	2.56	2.72	2.88	3.04	3.2
65	2.275	2.4375	2.6	2.7625	2.925	3.0875	3.25
66	2.31	2.475	2.64	2.805	2.97	3.135	3.3
67	2.345	2.5125	2.68	2.8475	3.015	3.1825	3.35
68	2.38	2.55	2.72	2.89	3.06	3.23	3.4
69	2.415	2.5875	2.76	2.9325	3.105	3.2775	3.45
70	2.45	2.625	2.8	2.975	3.15	3.325	3.5
71	2.485	2.6625	2.84	3.0175	3.195	3.3725	3.55
72	2.52	2.7	2.88	3.06	3.24	3.42	3.6
73	2.555	2.7375	2.92	3.1025	3.285	3.4675	3.65
74	2.59	2.775	2.96	3.145	3.33	3.515	3.7
75	2.625	2.8125	3.	3.1875	3.375	3.5625	3.75
76	2.66	2.85	3.04	3.23	3.42	3.61	3.8
77	2.695	2.8875	3.08	3.2725	3.465	3.6575	3.85
78	2.73	2.925	3.12	3.315	3.51	3.705	3.9
79	2.765	2.9625	3.16	3.3575	3.555	3.7525	3.95
80	2.8	3.	3.2	3.4	3.6	3.8	4.
81	2.835	3.0375	3.24	3.4425	3.645	3.8475	4.05
82	2.87	3.075	3.28	3.485	3.69	3.895	4.1
83	2.905	3.1125	3.32	3.5275	3.735	3.9425	4.15
84	2.94	3.15	3.36	3.57	3.78	3.99	4.2
85	2.975	3.1875	3.4	3.6125	3.825	4.0375	4.25
86	3.01	3.225	3.44	3.655	3.87	4.085	4.3
87	3.045	3.2625	3.48	3.6975	3.915	4.1325	4.35
88	3.08	3.3	3.52	3.74	3.96	4.18	4.4
89	3.115	3.3375	3.56	3.7825	4.005	4.2275	4.45
90	3.15	3.375	3.6	3.825	4.05	4.275	4.5
91	3.185	3.4125	3.64	3.8675	4.095	4.3225	4.55
92	3.22	3.45	3.68	3.91	4.14	4.37	4.6
93	3.255	3.4875	3.72	3.9525	4.185	4.4175	4.65
94	3.29	3.525	3.76	3.995	4.23	4.465	4.7
95	3.325	3.5625	3.8	4.0375	4.275	4.5125	4.75
96	3.36	3.6	3.84	4.08	4.32	4.56	4.8
97	3.395	3.6375	3.88	4.1225	4.365	4.6075	4.85
98	3.43	3.675	3.92	4.165	4.41	4.655	4.9
99	3.465	3.7125	3.96	4.2075	4.455	4.7025	4.95
100	3.5	3.75	4.	4.25	4.5	4.75	5.

Subsistence Table—Garrison Ration For Use in Conjunction with Table of Proportionate Multipliers

Table No. 8

GARRISON RATION.		*VALUES BASED ON 40 MEN FOR 10 DAYS.					
ARTICLES.	UNITS.	No. of rations.	Equivalent No. of units.	PURCHASE.			Out of savings made on regular rations
				As part of regular ration.	Per cent of total No. of rations.	No. of Units.	No. of Units.
1	2	3	4	5	6	7	8
BEEF, FRESH	Pound	280	350	350	70 %		
Bacon	Pound	120	90	60	20 %		
Canned corn beef hash....	2-lb. can					20	10%
Canned fish (salmon)	No. 1 can					32	8%
FLOUR							
Soft bread	Pound	22	24.75	24.75	5 ½ %		
Corn meal	Pound	374	420.75	420.75	93 ½ %		
	Pound	4	5	5	1 %		
BEANS, DRY							
Rice	Pound	320	48	48	80 %		
	Pound	80	8	8	20 %		
POTATOES							
Onions	Pound	320	400	400	80 %		
Tomatoes	Pound	40	50	50	10 %		
	Pound†	40	50	50	10 %		
PRUNES							
Apples, evaporated	Pound	120	9.6	9.6	30 %		
Jam	Pound	80	6.4	6.4	20 %		
	No. 2 can	200	10.158	10.158	50 %		
COFFEE, R. & G.							
Tea	Pound	375	26.25	26.25	94 %		
	Pound	25	.5	.5	6 %		
SUGAR							
	Pound	400	80	80	100 %	5	6%
MILK, EVAPORATED ..							
	Pound†	400	12.5	12.5	100 %	8	64%
VINEGAR							
Pickles	Gallon	200	1	1	50 %		
	Gallon	200	1	1	50 %		
SALT							
	Pound	400	16	16	100 %		
PEPPER							
	No. ¼ can	400	4	4	100 %		
CINNAMON							
	No. ¼ can	400	1.4	1.4	100 %		
LARD							
	Pound†	400	16				
BUTTER							
	Pound	400	12.5				
SYRUP							
	Gallon	400	4	.5	12 ½ %		
FLAVOR (extract)	2-oz. bottle	400	2.8				

*Apply Proportionate Multipliers where necessary.

†See remarks in "Explanation of Subsistence Table."

SUBSISTENCE TABLE. GARRISON RATION.
For use in conjunction with Table of Proportionate Multipliers.

ARTICLES.	SAVE.			or 400 RATIONS.			No of units for one man for one meal.
	On value of articles allowed, not purchased.		Per cent of total No. of rations.	No. of meals served.	Average No. of units per meal.		
	No. of units.	No. of articles allowed, not purchased.					
1	9	10		11	12	13	
BEEF, FRESH				16	21.875	.546876	
Bacon	30	10%		4 plus 2	10	.25	
Canned corn beef hash ...				2	10	.35	
Canned fish (salmon)				2	16	.4	
FLOUR				10	2.475	.061876	
Soft bread				30	14.025	.350625	
Corn meal				1	5	.125	
BEANS, DRY				5	9.6	.24	
Rice				3	2.6667	.0666	
POTATOES				17 plus 2	21.052	.5263	
Onions				10	5	.125	
Tomatoes				4	12.5	.31235	
PRUNES				3	3.2	.08	
Apples, Evaporated				2	3.2	.08	
Jam				3	3.386	.08465	
COFFEE, R. & G.				27	.9722	.0243	
Tea				3	.1666	.00416	
SUGAR				30 plus 2	2.6562 &	.0664 &	
					2.666	.06666	
MILK, EVAPORATED ..				27 plus 17	.466 &	.01165 &	
					.4852	.01213	
VINEGAR				4	.25	.00625	
Pickles				2	.5	.0125	
SALT				30	.5333	.01333	
PEPPER				30	.1333	.00333	
CINNAMON				7	.2	.005	
LARD	16	100%				.02	
BUTTER	12.5	100%				.0312	
SYRUP	3.5	87 1/2 %		5	.1	.0025	
FLAVOR (extract)	3	100%				.007	

Subsistence Table—Travel Ration
For Use in Conjunction with Table of Proportionate Multipliers
311.
Table No. 9

TRAVEL RATION.		VALUES BASED ON 40 MEN FOR 10 DAYS.							
		PURCHASE.						Out of sav- ings made on regular ration.	
		ARTICLES.	UNIT.	No. of rations.	Equivalent No. of units.	As part of regular ration.			
No. of units.	Per cent of total No. of rations.					No. of units.	Per cent of total No. of rations.		
1	2	3	4	5	6	7	8		
BEEF, CANNED CORNED	2-lb. can	200	75	75	50%	75	50%		
Hash, canned corn beef...	2-lb. can	200	75	75					
BREAD, SOFT†	Pound	400	450	450	100%				
Bread, hard	Pound	400	400	400	100%				
BEANS, BAKED	No. 3 can	400	50	50	100%				
TOMATOES CANNED	No. 2½ or No. 3 can	400	100	100	100%				
JAM	No. 2 can	400	22.22	22.22	100%				
COFFEE, R. & G.	Pound	400	28	28	100%				
SUGAR	Pound	400	60	60	100%				
MILK, EVAPORATED	Pound‡	400	12.5	12.5	100%				

† If not possible to get soft bread, take hard bread at above values.

‡ See remarks in "Explanation of Subsistence Table."

SUBSISTENCE TABLE. TRAVEL RATION.
For use in conjunction with Table of Proportionate Multipliers.

ARTICLES.	or 400 RATIONS.					Average No. of units per meal.	No. of units for one man for one meal.
	SAVE.		No. of units.	No. of meals served.	Average No. of units per meal.		
	On value of articles allowed, not purchased.						
	Per cent of total number of rations.						
1	9	10	11	12	13		
BEEF, CANNED CORNED							
Hash, Canned Corn Beef..			10	7.5	.1875		
BREAD, SOFT	75	50%	10	7.5	.1875		
Bread, hard			30	15	.375		
BEANS, BAKED			30	13.333	.3333		
TOMATOES, CANNED ..			10	5	.125		
JAM			10	10	.025		
COFFEE, R. & G.			10	2.2222	.0555		
SUGAR			30	.9333	.02333		
MILK, EVAPORATED ..			30	2	.05		
			30	.4166	.0104		

Subsistence Table—Reserve Ration
For Use in Conjunction with Table of Proportionate Multipliers
 312.
 Table No. 10

RESERVE RATION.		VALUES BASED ON 40 MEN FOR 10 DAYS.								
		PURCHASE.				Out of sav- ings made on regular ration.				
		ARTICLES.	UNIT.	No. of rations.	Equivalent No. of units.				No. of units.	Per cent of total No. of rations.	No. of units.	Per cent of total No. of rations.
1	2				3	4	5	6					7	8
BACON	Pound	400	300	300	100%				
BREAD, HARD	Pound	400	400	400	100%				
COFFEE, R. & G.	Pound	400	28	28	100%				
SUGAR	Pound	400	60	60	100%				
SALT	Pound	400	4	4	100%				
PEPPER	Pound	400	.5	.5	100%				

NOTE: To the above list may be added the amounts of Ice, Soap, Candles, and, for mounted organizations, Vinegar and Rock salt as may be approved by the Commanding Officer.

SUBSISTENCE TABLE. RESERVE RATION.
For use in conjunction with Table of Proportionate Multipliers.

ARTICLES.	or 400 RATIONS.						No. of units for one man for one meal.
	SAVE.		No. of meals served.	Average No. of units per meal.			
	On value of articles allowed, not purchased.						
	No. of units.	Per cent of total number of rations.					
1	9	10	11	12	13		
BACON			30	10	.025		
BREAD, HARD			30	13.333	.3333		
COFFEE, R. & G.			30	.9333	.02333		
SUGAR			30	2	.05		
SALT			30	.1333	.003333		
PEPPER			30	.01666	.0004		

Explanation of Subsistence Table

313. There is a good deal of information in this table in a condensed form, and if an organization commander will become familiar with its use he should have very little trouble concerning the drawing of his rations and with his menus.

314. The Subsistence Table, the Table of Proportionate Multipliers, and the Table of Sample Menus are to be used in conjunction, this table being the one on which the other two are based. Its purpose is to provide ready and simple means by which an organization commander, who may be more or less inexperienced with the ration, may determine quickly and easily the proper articles of food to obtain on a ration return and the necessary amounts of each article.

315. The table is calculated on the basis of 40 men being subsisted for 10 days, but is applicable to *any number of men* for *any number of days*, by using, with the values given in this table, the proper *multiplier* obtained from the table of Proportionate Multipliers, combined with a little common sense. The amounts of the various articles so obtained will correspond with the Table of Sample Menus, or, if there be a slight difference, it will be in favor of the organization.

316. The Table of Proportionate Multipliers can be used with *any* subsistence table, constructed similarly to this one, if such subsistence table is computed on the basis of 40 men for 10 days. Also, other menus can be devised from this subsistence table provided that the total amount of each article and the number of meals with which it is used correspond to the amounts and the meals as given in this table.

317. The following articles of the ration have been saved, i.e., not purchased:

10% of Bacon.

All of Lard.

All of Butter.

All of Flavoring Extract.

87½% of Syrup.

For these savings there have been purchased:

10% of entire number of rations in Canned Corn Beef Hash.

8% in Canned Salmon.

6% in extra Sugar.

64% in extra Milk.

This will probably not utilize all of the credit due to an organization for its savings, and other articles, such as butter,

lard, canned peaches, etc., may perhaps still be purchased on the credit allowance of that organization. Using the prices current at the time of writing the table there would still be a credit of \$3.11 due the organization after it had purchased supplies in accordance with the Subsistence Table. This margin is left, due to fluctuations in the prices of foodstuffs.

Meaning of the Various Columns

318. *Column 1.* This column shows the articles of food which are to be obtained from the Commissary. The articles printed in the capital letters are component articles; those in small type the substitutive equivalent.

319. *Column 2.* This column shows the "unit" in which the particular article in column 1 is obtained. For example, fresh beef is obtained by the "pound"; pickles by the "gallon." Tomatoes, milk evaporated, and lard may be obtained in one of the several different sized containers, depending on which kind the Commissary happens to have in stock, hence the "unit" for these articles is given as the "pound" because the number of or fraction of the pound in any of such containers is known at the Commissary and can be readily determined by the organization commander by consulting paragraph 294, "Net Contents of Various Packages."

320. *Column 3.* This column shows the proportion of the number of "rations" of each component. Out of 400 rations of the meat component 280 rations are of beef and 120 are of bacon.

321. *Column 4.* The number of *rations* of each article as given in column 3 have been converted into "units" in column 4. For example, 280 *rations* of fresh beef make 350 *pounds* (unit of beef is pound) of the article.

322. *Column headed "Purchase."* Correctly speaking, "rations" are no longer "drawn" from the Commissary, as of old. In previous pages it has been explained that a certain *money allowance* is placed to the credit of each organization and that the articles of food may be "purchased" from the Commissary up to and including the total value of this credit.

323. *Column headed "Save."* The difference between the total money allowance, placed to the credit of an organization, and the total money value of the articles "purchased" constitutes

that organization's *savings*. If all of each ration article allowed, in its proper proportion, were purchased there would be no saving made by the organization, and it could not obtain any articles of food not a part of the ration, nor could it obtain any articles in *excess* of those authorized as a part of the ration. For example, if an organization should desire some extra cans of milk or some canned pears there would be no way of obtaining any of these. Hence, some articles are "saved," either part or all of them, which may not be desired or be in excess of the needs of camp fare, and with this saving are purchased such extras as are desired.

324. Columns 5 and 7. These columns give the number of *units* of each article that an organization is to *purchase* from the Commissary. Notice that columns 5 and 7 are headed "No. of Units," consequently, in making up the list of articles desired do not for example, apply for "20 *pounds* of Canned Corn Beef Hash," but apply for corn beef hash in the unit in which it is sold, i.e., 2 pound cans. This would give 40 pounds instead of 20.

325. Columns 6 and 8. These columns show what percentage of the *total* number of rations to *purchase* of each article. For example, 70% of 400 rations = 280 rations = 350 *lbs.* of fresh beef; also 10% of 400 rations = 40 rations = 20 2-lb. cans of corn beef hash. Note the use of the Ration Conversion Table in converting these rations to units.

326. Column 9. As explained for columns 5 and 7 except that the values in this column represent the number of units of articles *saved* instead of *purchased*.

327. Column 10. As explained for columns 6 and 8 except that the percentages in this column represent the percentage of the total number of rations, for any one article, shown in the column, *saved* instead of *purchased*.

328. Column 11. This column shows the number of meals of each article listed in column 1 that can be had for *10 days* providing the rest of the table has been adhered to in purchasing supplies. If the troops are to be subsisted for *other than 10 days* the column can still be used by following this rule:

Rule:—Multiply the values given in column 11 by the number of DAYS the organization is to be subsisted and divide the result by 10.

The use of this rule requires that the amounts given in columns 5 and 7 shall have been corrected by means of the proper multiplier obtained from the Table of Proportionate Multipliers as described in the paragraph headed "How to Use the Subsistence Table."

By the proper use of columns 5, 7, and 11 an organization commander may make up his own list of menus and does not need to follow that given herein if he does not so desire.

It will be noticed that on the line with "Bacon" the figures 4 plus 2 appear in this column. This means that bacon can be used 6 times, but, in the "Table of Sample Menus" it is used 4 times fried for breakfast and the *equivalent* of 2 times more (4 times) with baked beans. Similar remarks would apply to sugar and milk on account of the "mush and milk," sugar being used 30 times with coffee and tea and the *equivalent* of two times more with mush; milk being used 27 times with coffee and the *equivalent* of 17 times more with mush. Consequently, in dropping out this breakfast of "mush and milk" this extra milk and sugar should be considered.

329. *Column 12.* This column shows the average number of units for each article that can be used for each meal in which that article appears. It must be remembered that these values are for 40 men for 10 days; for any other number of men or days multiply these values by the proper multiplier given in the "Table of Proportionate Multipliers."

330. *Column 13.* This column shows the number of *units* of each article given in column 1 that one man should be allowed for one meal. The values in this column remain the same, not depending on the number of men nor the number of meals to be furnished. This column is convenient in determining how much of any article to purchase for a certain number of men for a certain number of *meals*, not *days*.

Examples in the Use of the Subsistence Table

Column 1

331. *Example 1.* What articles of the Garrison ration shall an organization purchase from the Commissary?

Answer: All articles enumerated in column 1 except Lard, Butter, and Flavoring Extract.

Columns 5 and 7

332. *Example 2.* How much of each article shall an organization of 36 men drawing rations for 9 days purchase at the Commissary?

Turn to the Table of Proportionate Multipliers and, as explained for the use of the table, determine the multiplier for "36 men" and "9 days." This is found to be .81. Multiply each value given in column 5 and also in column 7 by this multiplier. The result in each column will be the number of *units* of that article to purchase. Look in column 2 to see what the unit is.

333. *Example 3.* How many rations is an organization of 36 men entitled to for 9 days?

Answer: $36 \times 9 = 324$ rations.

Column 6

334. *Example 4.* Out of 324 rations, to which an organization is entitled, how many *rations* of bacon should be *purchased*?

Answer: Under "Purchase" in column 6 and on a line with bacon is 20%. 20% of 324 rations is 64.8 rations of bacon.

335. *Example 5.* How many units of bacon will 64.8 rations be? (Rations to Units)

Answer: Turn to the Ration Conversion Table, and, as explained for that table, multiply 64.8 by .75, the result is 48.6 pounds of bacon, pound being unit for bacon.

336. *Example 6.* How many rations of bacon will 48.6 lbs. make?

Answer: The pound is the unit for bacon, as shown in column 2. Turn to Ration Conversion Table, and, as explained for that table, multiply 48.6 by 1.333 and the result, 64.7838, or practically 64.8, will be the number of rations of bacon.

337. *Example 7.* What is the total money value of 9 days' rations for 36 men if the value of one ration is 25 cents?

Answer: $9 \times 36 = 324$ rations. $324 \times .25 = \$81.00$. Total money value.

338. *Example 8.* If an organization is allowed to purchase rations to the value of \$90.64 and the organization is to subsist 42 men for 8 days, what is the value of one ration?

Answer: $42 \times 8 = 336$ rations.

$\$90.64 \div 336 = \0.24 the value of one ration.

339. *Example 9.* If the value of the government ration is 26 cents, how much will the organization in example 8 be short on its credit of total money value in the Commissary?

Answer: 26 cents — 24 cents = 2 cents short on each ration. $2 \text{ cents} \times 336 = \6.72 short on its credit allowance.

Column 11

340. *Example 10.* How many meals of fresh beef should an organization have if it has drawn rations for 8 days in conformity with Subsistence Table?

Answer: Follow the rule given for column 11, par. 310.

$16 \text{ meals} \times 8 = 128$; $128 \div 10 = 12.8$, or 13 meals of fresh beef.

Column 12

341. *Example 11.* How much fresh beef can be used each meal by an organization of 36 men drawing rations for 9 days in conformity with the Subsistence Table?

Answer: The proportionate multiplier for 36 men 9 days is .81; in column 12 on a line with "Beef, fresh," is found 21.875, hence: $21.875 \times .81 = 17.71$ pounds (units) of fresh beef per meal.

Column 13

342. *Example 12.* An organization commander is sending out a party of 20 men and wishes to give them, among other articles, some cans of salmon. How many cans shall he give them for 2 meals?

Answer: In column 13 and on a line with "Salmon" is found 0.4. This is the allowance in cans for *one man* for *one meal*. But each man is to have 2 meals and there are 20 men, hence: $0.4 \times 2 \times 20 = 16$ cans of salmon.

RATION RETURN

The Blank Form

343. Rations are drawn on blank form No. 223 Q. M. C., which is supplied in the form of a pad containing 50 alternate white and blue sheets. The white sheet is the original which is furnished the Supply Officer through Regimental Headquarters at

the beginning of the ration period; the blue being the copy retained by the organization commander.

344. In the field in time of war, the Reserve ration is obtained on Field form No. 3—Field Ration Return for Haversack Ration—but all other rations are habitually obtained on form 24, as are also such extra issue articles, as ice, soap, etc.

No organization should ever go into the field without its book of ration return blanks.

345. Suppose 40 men are to be rationed for 10 days and that there are no “additions” or “subtractions” (see explanation later) to be entered on the return; that the Garrison rations are to be drawn for 9 days and Travel rations for 1 day.

Following the lines of the return in order,
Ration return of—Enter the organization, as “Co. A, 1st Inft., M. V. M.,” or “Detachment Co. B, Signal Corps, N. J. N. G.,” etc.

At—Enter the place of the encampment, as “Rome, N. J.,” or “1½ miles N. W. of Orange, Conn.,” or “Johnson’s Pasture, near Weston, Mass.”

From—The date supplies are desired, as “August 1, 1918.”

To—The last date troops are to be subsisted on that return, as “Aug. 10, 1918.”

No. of days—Add the number of days between the above dates, both dates being *inclusive*, as, in this case, “10.”

Persons present—No. of *enlisted men* entitled to rations and present for duty with the organization on the day on which the ration return is submitted, as “40.”

No. of rations—The product of the “number of days” and “persons present,” or 10×40 , hence “400.”

Additions—Such additions as are shown on the morning report, in this case 0.

Deductions—Such deductions as are shown on the morning report, in this case 0.

Net Corrections—The difference between additions and deductions. In case the additions exceed the deductions the difference must be *added* to the number of rations. In case the deductions exceed the additions the difference must be *subtracted* from the number of rations.

Total—The “number of rations” plus or minus (as the case may be) the “net corrections.” In this case “400.”

Note:—On this return 400 rations would be issued to the organization.

The above rations are not all Garrison rations, Travel rations are to be issued for one day. Hence:

Number of rations required,

Garrison—Enter “360,” which is the product of 40 (men) and 9 (days).

Travel—Enter “40,” which is the product of 40 (men) and 1 (day).

Thus tallying on the same line 400 as before.

No. of Emergency rations required,

“None,” unless especially ordered, in which case enter the number which would be the product of the number of men to ration for the number of days for which the emergency ration has been ordered. These emergency rations are *in excess* of the regular rations and do not affect the rest of the ration return, although, if issued, the money value of them would be charged against the State's allotment.

No. of animals—“None,” or whatever number of *public* animals the organization has.

Other issues—See paragraph 293 for “Extra Issue Articles” and their amounts allowed per ration; for example, on a ration return calling for 400 garrison rations—Soap “16 lbs.” (this is more than is necessary in camp. $\frac{1}{2}$ that amount would be sufficient); Candles “6 lbs.” (60 lantern candles or 36 candles); ice, 100 lbs. per day for 10 days or “1,000 lbs.”

Back of Ration Return

After words “Made by”—Enter the name and rank of the officer, if any, who last issued rations to the organization, as “Capt. J. B. Smith, 16th U. S. Inft.” If no former issue has been made, enter “No previous issue.”

After “Commissary at”—Enter the place from which the last supplies were drawn, as “Derby, Conn.” If no previous issue has been made draw a line through this space.

After the words “date of”—Enter the last date for which the present rations are supposed to last. For example, if the

last return called for rationing to (and including) August 10, put "Aug. 10, 1918" in the space.

Notice the certificate concerning emergency rations.

Dotted lines:

The first dotted line under the certificate is for the signature of the person submitting the return, as "W. E. Jones."

The second dotted line is for his rank, as "Capt., 1st Inft., N. Y. N. G."

The third dotted line shows in what capacity "Capt. Jones" is acting, as "Commanding Company," etc.

On the last dotted line and before "Commanding" enter the rank of the officer who is to approve the return, as "Colonel 23 Inft., U. S. A."

Blue Copy

346. Duplicate on the face of the blue copy the data just entered on the face of the white copy. Turn the blue copy over and enter thereon the name and rank of the officer who issues the rations, and the place where and date when the issue is made, as "Rationed by Capt. J. B. Smith, 16th Inft., Comsy., Derby, Conn., to include Aug. 10, 1918." If this is not known at the time, enter it as soon as known.

By Whom Made Out

347. The ration return is made out by the First Sergeant, but the Company Commander must approve it, consequently he must understand it. When a ration return is submitted for the Company Commander's signature the morning report should also be submitted with it to enable the officer to check up the net corrections, number of men, etc.

348. All company officers are advised to learn to make out this blank as it is one of the most important that the company has to submit.

List of Articles to Accompany Return.

349. The Mess Sergeant, under the supervision of the company commander, should make out a list of the articles desired each time rations are to be obtained. Usually supplies may be obtained from the Supply Officer each day, in which case the list is prepared whenever supplies are needed. This list is taken to the Commissary after the ration return has reached that

office and handed to the non-commissioned officer who is to issue the supplies.

350. In making out this list the Mess Sergeant should consult the Subsistence Table and should follow this method:

Ascertain from the First Sergeant for how many men and how many days rations are to be drawn and what kind of rations. Knowing the number of *men* and *days* and the kind of rations obtain the correct multiplier from the Table of Proportionate Multipliers. Multiply each quantity in columns 5 and 7 of the Subsistence Table (for the correct ration) by this multiplier and the result will be the correct amounts of each article enumerated in column 1 in the units as given in column 2 to purchase.

Check up by means of column 11 to see if the "No. of Meals" comes out correctly, if not alter the list slightly. The table is only a guide, and when rations are to be drawn for a *very few days*, as for example 3 days, it will be seen that the number of meals for some articles will not permit any of those articles to be used. Three day issues are the exception, 5 and 10 day issues are the rule but usually necessary small articles can be obtained from the Supply Officer at the designated time each day.

351. If the organization is to be in camp 9 or 10 days and is to draw rations twice, 5 and 4 day periods, draw according to the Subsistence Table, because in the end the rations will come out all right.

Submitting a Ration Return

352. The method of submitting a ration return is detailed as follows:

Upon receipt of notice from proper authority to submit a ration return (or, without notice, the end of the period for which the present return was submitted) the First Sergeant makes out the ration return for the kind of rations and the number of days as directed and for the proper number of men as shown by the morning report of that day making the net corrections correspond to the balance of the "additions" and "deductions" given by the morning report. The First Sergeant completes the return by entering in the proper places on the return such quantities of extra issue articles as are needed and will be allowed; preparing the return for the Organization Com-

mander's signature and for the approval of the proper person. The First Sergeant calls on the Mess Sergeant for a "List of articles desired," at the same time notifying the Mess Sergeant of the kind of rations that are to be drawn and for how many men and days.

On receipt of this list the First Sergeant takes the return, the list, and the morning report to the Company Commander for signature. The Company Commander should check the return by the data contained in the morning report, should look over the list sign both and return them to the First Sergeant.

The ration return is then taken to the proper person for approval and the list is returned to the Mess Sergeant, the morning report is retained. The person who takes the ration return to headquarters should ask if he is to wait for it to be approved, or if it is to be sent to the Supply Officer. In the former case he will take it back to the company.

Drawing Rations

353. The ration return having been sent to the Supply Officer or to the Company, the Mess Sergeant should take two enlisted men from the kitchen and proceed to the Supply Tent, taking with him his list of articles and the return, if same has been returned to the company. Upon reaching the Supply Tent the Mess Sergeant hands in the return and the list of articles to be drawn and receives his supplies together with his charge slip. He should check these supplies with the list. He will be required to sign for the supplies purchased. The charge slip should contain an itemized statement of articles and the amount charged for each, together with the total amount charged.

He should then inquire the amount of credit allowed his organization on the ration return received that day, and from this amount can ascertain the amount of credit remaining due the organization. This credit due should be drawn before the next return is submitted, fresh beef and bread will be charged against this amount. The charge slip should be returned to the First Sergeant for record and future use of the Company Commander.

Caring for the Rations

354. Rations should be kept in a store tent that is well ditched. The walls of this tent should be raised daily, but not so as to allow the sun to strike the rations.

Bread. Should be kept in a box covered; not wise to wrap it in a cloth.

Beef. Should be kept screened from flies. Kept on ice when practicable. If no ice is available hang in the shade of a tree, wrapped to keep off flies. If steaks are to be cut for use next morning, cover each steak liberally with salt and pepper and place one steak on top of another in a wooden or enamel bowl. If a hind quarter of beef has been drawn it is best to at once cut off the flank.

Potatoes and Onions. Should be spread out on racks raised off the ground, not exposed to the sun but free to the air. Spoiled ones should be removed daily.

Beans, Rice and Sugar. Should be kept in sacks or boxes free from dampness and off the ground.

Evaporated Fruit. Kept free from dampness to prevent mold.

INDIVIDUAL COOKING

(Taken largely from *Manual of Army Cooks*)

355. A few remarks on this subject are considered necessary as a soldier in the field may at any time be thrown upon his own resources and have to do his own cooking. The mess kit and cup are the only cooking utensils needed, though an empty tomato can may come in handy. The best fire to use is one with the least smoke, as articles cooked in smoke will taste of it. Hot glowing coals are recommended, corn cobs make an excellent fire. A small pit, about 10 inches long and 5 inches wide dug in the ground makes a handy "stove" to rest the mess kit on while cooking. Company commanders should consult column 13, Subsistence Table, in making estimates for supplies; in the case of sugar and milk take the lower of the two figures in either case.

Bills of Fare

356. When time is not limited: 1 hour or more.

1. Bacon, boiled rice, flapjack, coffee.
2. Meat and vegetable stew, flapjack, coffee.
3. Broiled steak, fried potatoes and onions, hard bread, cocoa.
4. Bacon, stewed tomatoes, hoccake, coffee.
5. Bacon, baked potatoes, rice, flapjack, chocolate.
6. Fried steak, boiled potatoes, cold tomatoes, hard bread, coffee.

357. When time is limited: 40 minutes.

1. Fried bacon, fried potatoes, hard bread, coffee.
2. Fried bacon, flapjack, coffee.
3. Cold corned beef, tomato stew, hard bread, coffee.
4. Fried fish and bacon, baked potatoes, hard bread, coffee.
5. Meat and vegetable stew, hoeecake, coffee.
6. Broiled steak, baked potatoes, hard bread, coffee.
7. Boiled fish, fried potatoes, hard bread, tea.

358. When time is limited: 20 minutes.

1. Cold canned salmon, cold canned tomatoes, hard bread, cocoa.
2. Cold corned beef hash, jam, hard bread, cocoa.

Suggestions Concerning Cooking

Meats

359. *Bacon, fried.* Cut side of bacon in half lengthwise, then cut slices of about 5 to the inch, 3 slices being enough for 1 man for 1 meal. Place in a mess pan with about $\frac{1}{2}$ inch of cold water. Let come to a boil, then pour off the water. Fry over a brisk fire, turning the bacon once quickly and browning it. Remove bacon to lid of mess pan, leaving grease for frying potatoes, onions, etc.

360. *Fresh meat, to fry.* A small piece of fat (1 or 2 spoonfuls) is necessary. Put grease in a mess pan and let come to a smoking temperature, then drop in the steak and, if about $\frac{1}{2}$ inch thick, let fry for about a minute before turning—depending upon whether it is desired it shall be rare, medium or well done. Then turn and fry briskly as before. Salt and pepper to taste.

361. *To broil.* Cut in slices about 1 inch thick, from half as large as the hand to 4 times that large. Sharpen a stick of convenient length, say 3 feet long, and weave the point of the stick through the steak several times so that it may be readily turned over a few brisk coals on the windward side of the fire. Allow to brown nicely, turning frequently. Salt and pepper to taste. Meat with considerable fat is preferred, though any meat may be broiled in the same manner.

362. *To stew.* Cut into chunks from $\frac{1}{2}$ to 1 inch cubes. Fill cup about $\frac{1}{3}$ full of meat and cover with about 1 inch of water. Let boil or simmer about 1 hour or until tender. Add

such vegetables as carrots, turnips or cabbage (cut into small chunks) soon after the meat is put on to boil, and potatoes, onions, and other vegetables when the meat is about half done. Amount of vegetables to be put in is about the same as meat, depending on the taste and supply. Salt and pepper to taste. Applies to all fresh meat and fowls. Fresh fish can be handled as above except that it is cooked quicker and that potatoes, onions, and canned corn are the only vegetables generally used with it, thus making a chowder. A slice of bacon would improve the flavor. May be conveniently cooked in a mess pan or tin cup.

Fresh Vegetables

363. *Potatoes, fried.* Take 2 medium sized potatoes or a large one (about $\frac{1}{2}$ pound), peel and cut into slices about $\frac{1}{4}$ inch thick and place (scattered) in the mess pan containing the grease remaining after frying the bacon. Add sufficient water to half cover the potatoes, cover with the lid to keep the moisture in and let come to a boil for 15 or 20 minutes. Remove the cover and dry as desired. Salt and pepper to taste. During the cooking, the bacon already prepared may be kept on the cover, which is most conveniently placed bottom side up over the cooking vegetables.

364. *Boiled.* Peel 2 medium sized potatoes, or 1 large one, and cut into small chunks, about $1\frac{1}{2}$ inch cubes. Place in a mess pan and $\frac{3}{4}$ fill with water. Cover with lid and let boil or simmer 15 or 20 minutes. They are done when easily penetrated with a sharp stick. Pour off the water and let dry out for 1 or 2 minutes over hot ashes or coals.

365. *Baked.* Take 2 medium sized potatoes or 1 large one, Lay in a bed of light coals, cover with same and smother in ashes. Do not disturb for 30 or 40 minutes, when they should be done.

366. *Onions, fried.* Same as potatoes, fried.

367. *Rice, boiled.* Put 4 heaping spoonfuls in $\frac{2}{3}$ of a cup of boiling water. Let boil about 20 minutes. Add 2 pinches of salt, and, if desired, 1 spoonful of sugar. Should be boiled until the grains, while nicely separated, may be crushed between the fingers with but little resistance. Then drain off the water.

368. *Corn meal, boiled.* Put 4 heaping spoonfuls in $\frac{1}{3}$ of a cup of boiling water. Let boil about 20 minutes. Add 2 pinches of salt. All water should now be taken up by the corn meal,

which forms a thick paste.

369. *Hominy, boiled.* Same as corn meal.

370. *Oatmeal, boiled.* Same as corn meal.

371. *Corn, dried, sweet.* Put 4 heaping spoonfuls in $\frac{1}{3}$ cup of boiling water. Boil about 20 minutes. Add 2 pinches of salt and, if desired, 1 spoonful of sugar.

372. *Beans, lima.* Put 4 heaping spoonfuls in $\frac{2}{3}$ of a cup of cold water. Boil from 2 to 3 hours. Add 1 pinch of salt. When done the beans should be whole, but soft. Add 1 small slice of bacon $\frac{1}{2}$ hour before done. Add water as required.

373. *Beans, chili.* Same as for lima beans except the time required is from 3 to 4 hours. Not recommended, due to length of time necessary to cook.

374. *Beans, issue.* Same as for chili beans.

375. *Frijoles.* Same as for chili beans.

376. *Peas, dried, green.* Same as for chili beans.

377. *Peas, coarse, split.* Same as for chili beans.

378. *Hominy.* Same as for chili beans.

379. *Tomatoes, canned.* One 2 lb. can is generally sufficient for 5 men.

(a) Pour into mess pan 1 man's allowance, add 2 large hardtacks broken into small pieces, and let come to a boil. Add 1 pinch of salt and $\frac{1}{4}$ spoonful of sugar.

(b) Having fried bacon and the grease remaining, pour tomatoes into a mess pan. Add, if desired, 2 broken hardtacks. Set over a brisk fire and let come to a boil

(c) Heat tomatoes just as they come from the can, adding 2 pinches of salt and, if desired, $\frac{1}{2}$ spoonful of sugar.

(d) In hot weather, eat cold with hard bread.

Drinks

380. *Coffee.* Coffee made by this receipt is of medium strength, the same as when using 4 ounces to the gallon of water. It is within the limit of the ration if made twice a day. Put 1 heaping spoonful in $\frac{2}{3}$ of a cup of boiling water. Let boil 5 minutes. Add 1 spoonful of sugar. Stir well while adding. Let simmer 10 minutes after boiling. Settle with a dash of cold water or let stand a few minutes, when it will be ready to serve.

381. *Cocoa*. Put 1 heaping spoonful in $\frac{2}{3}$ of a cup of boiling water. Let boil 5 minutes. Add $1\frac{1}{2}$ spoonfuls of sugar, stir while adding until dissolved. Ready to serve when sufficiently cooled.

Note: If available, milk may be used in place of water and should not quite reach the boiling point. Mix a 1 lb. can of evaporated milk with $3\frac{1}{2}$ quarts of water to make 1 gallon of milk of the proper consistency for use in making cocoa or chocolate.

382. *Chocolate*. Same as for cocoa except that 1 cubic inch per man is usual allowance.

383. *Tea*. Tea made by this receipt is a little more than medium strength, being the same as when using $\frac{3}{5}$ ounce to the gallon of water, and is within the ration allowance if used three times a day. Put $\frac{1}{2}$ level spoonful in $\frac{2}{3}$ of a cup of boiling water. Boil 5 minutes. Add 1 spoonful of sugar. Let stand or "draw" 8 minutes. If allowed to stand longer the tea will get bitter unless separated from the grains.

Hot Breads

384. *Flapjack*. Mix thoroughly 6 spoonfuls of flour with $\frac{1}{3}$ spoonful of baking powder, or dry mix in a large pan before issue at the rate of 25 lbs. of flour to 3 half pound cans of baking powder, for 100 men. Add sufficient cold water to make a batter that will drip freely from the spoon, adding 1 pinch of salt. Pour into a mess pan containing grease from fried bacon, or a spoonful of butter or fat, and place over the medium hot coals sufficient to bake so that in from 5 to 7 minutes the flapjack may be turned by a quick toss of the pan. Fry from 5 to 7 minutes longer or until, by examination, it is found to be done.

385. *Hoecake*. Same as for flapjack, substituting corn meal for flour.

CHAPTER VII

CAMPS AND THEIR SANITATION

Camps

386. The conditions for a good camp are as follows:

1. Ground should be large enough to accommodate the command.
2. The water supply should be abundant, of good quality, and conveniently accessible.
3. The drainage should be good; the crest of a low ridge with gentle slopes is favorable to drainage. There should be no stagnant water within 300 yds.
4. There should be good roads within the camp and good facilities for communication within.
5. Wood, grass, forage and supplies must be at hand or readily procurable.
6. The camp ground should not, if possible, have been used previously for the same purpose within 1 year.
7. Should not be near a cemetery.
8. Should be free from dust and have shade near if possible.
9. The south side of a slope is better than the north side.
10. Closely cropped turf with sandy or gravelly subsoil is best, clay is damp.
11. The ground at the foot of a hill is not desirable.
12. Thick forests, dense vegetation, made ground, alluvial soil, punch bowl depressions, inclosed ravines and dry beds of streams are not desirable.

Formations for Tents, Location of Picket Lines

387. Shelter tents: For each company, in 2 lines facing each other, lines 15 to 20 yards apart.

Common tents: For each company, in 2 lines facing each other, lines 15 to 20 yards apart.

Wall tents: In 1 or 2 lines for each company.

Conical or Pyramidal: In 1 line for each company, 20 yds. between company streets.

Artillery paulins: Field artillery may sleep under the carriages and not use shelter tents.

Picket lines: For cavalry, 40 yards apart, length about 100 yards for troop. For field artillery, 100 yards apart, length about 160 yards for a battery; or picket lines may be stretched between carriages for a temporary camp.

Contracted camps: As explained in Appendix I, Field Service Regulations.

Going Into Camp

388. Duties are usually performed in the order given; if shelter tents are used, amend duties slightly to conform to shelter tent pitching.

389. Infantry:

Forms line; stacks arms; removes equipments and puts them on ground in rear of stacks; First Sergeant reads details for latrine, kitchen, officers' tents, etc.; Company breaks ranks to attend to pitching of tents and other duties; when tents are up details may be augmented; tents are ditched; straw, leaves, or boughs are procured for bedding; stacks are broken and any necessary orders are read; company is dismissed.

390. Cavalry:

Forms line; dismounts; temporary picket line (of lariats) in *front* of line of horses is established; unsaddle; place saddles and equipments in *rear* of line of horses; tie to picket line; First Sergeant reads details; tents are pitched and details assume duties; permanent picket line constructed. Watering, grooming, and feeding done according to circumstances or hour of arrival.

391. Field Artillery:

Forms line; First Sergeant reads details; drivers unhitch and unharness while cannoneers stretch picket line over caisson bodies; drivers tie to line; tents are pitched and details assume duties. Watering, feeding and grooming done according to circumstances or hour of arrival. In feeding each chief of section sends 2 or 3 cannoneers to get grain for entire section, while drivers groom. Stable police feeds hay.

392. Signal Corps:

As given for cavalry, drivers unhitching and tying animals to picket line.

Breaking Camp

393. Infantry:

Men fall in ranks under arms at reveille; First Sergeant reads details; arms are stacked and left so; breakfast; men pack their kits and lay them on a line in rear of the stacks; details attend to their duties while property is being loaded; tents are struck, folded, placed on pile of property; all men police camp; at assembly men fall in in rear of packs, put them on, and step up to line of stacks; stacks are broken; roll called; organization formed for the march.

394. Cavalry:

If an early start is to be made each man fills his nosebag the night before and leaves it in charge of the stable guard; the stable guard feeds all animals before reveille, otherwise each man feeds his horse immediately after reveille, before his own breakfast.

Reveille; First Sergeant reads details; breakfast, subject to above paragraph, make up packs and strap them on saddles; details attend to duties; property is loaded; tents are struck, folded and placed upon pile of property: camp is policed; animals saddled; ranks formed for the march.

395. Field Artillery:

Stable guard feeds before reveille; reveille; First Sergeant reads details from among cannoneers; breakfast; packs made up; short stables and watering; details attend to duties while property is being loaded; tents are struck, folded and placed on the pile of property; drivers harness and hitch while cannon-eers take down picket line and police camp; battery formed for the march.

396. Signal Corps:

Conforms to the methods outlined for the Cavalry; drivers harness and hitch while mounted men saddle.

Laying Out a Large Semipermanent Camp

397. This paragraph is for use as a reference in laying out a camp such as is usually necessary at a mobilizing point.

1. Request 1 officer and a few competent enlisted men as assistants.

2. Ascertain what troops and how many are to camp, and dates of arrival.
3. Compute the size of the camp. (See Field Service Regulations).
4. Cause a good contoured map to be drawn of the camp site on a scale of at least 12 inches to the mile, cause blue prints to be made of this map.
5. Lay out the camp on the map as follows:
 - (a) Divide the site up into organization camps on the map, numbering each.
 - (b) Subdivide these organization camps into regimental, battalion and company camps on the map and letter each.
 - (c) Run pipe lines, on the map, for water to the kitchen of each company, headquarters, large messes, corrals, picket lines, etc.
 - (d) Run telephone lines and a telegraph line connected to the commercial telegraph line near-by; have the telephone exchange centrally located, usually at headquarters; have telegraph office in same tent with telephone exchange; have post office near the same place.
 - (e) Run light wires if electricity is to be used.
 - (f) Lay out sites for the Quartermaster corral, storage purposes, fuel and forage yards, camp bakery, camp commissary, field hospital, etc. Lay out the roads to be followed.
 - (g) Consult with railroad company concerning sidings at the storage and unloading points, and draw them to scale on the map.
 - (h) Construct a ramp for unloading animals, vehicles and freight from the cars. Show location on the map.
6. Obtain some stakes about a foot long, 2 inches wide, 1 inch thick; sharpen one end; paint the other end with a bar across one side only, using a color scheme for the different kinds of tents and points to be marked, different colors for each.
7. Prepare chart cards for tentage. The following is suggested:

Card $10\frac{1}{2}$ inches by $4\frac{3}{5}$ inches.

Allow $\frac{1}{2}$ inch at one end for the number of the camp and regiment to occupy it, and a hole in the center to hang the card up.

Rule card lengthwise with 22 lines $\frac{1}{5}$ inch apart.

Rule card crosswise with 13 lines at $\frac{3}{4}$ inch apart.

Turn card sidewise and head columns from left to right as follows:

Subdivisions; Organization; Common; Conical; Hospital; Storage; Pyramidal; Wall; Hospital fly; Wall fly; Picket line ft.; Wagon line.

In column headed "Organization," fill in various companies, regimental and battalion headquarters, regimental hospital, corral, etc., and on their respective lines enter the tentage allowed each.

Total the columns.

On reverse side of the card cause to be printed the meaning of the colors on the stakes; when and where supplies of all sorts are to be obtained and the allowance to each organization. Where telegraph and post office are located and the hours for arrival and departure of mails.

8. Stake out the camps, and either erect the tents on the stakes or issue tentage in bulk to each incoming organization, furnishing each with a duplicate chart card. If camp is to be hurriedly laid out, or if organizations bring their own tentage merely stake the lines of officers' tents, men's tents and picket lines, using end stakes only to indicate the lines.
9. Cause all yards, lines, etc., to be constructed as planned on the map and cause teams to follow the roads planned.
10. Upon arrival of supplies segregate them into separate piles, each kind of tentage in a pile by itself; cord the wood; stack the forage; cover tents and forage with paulins. Do not place tentage directly on the ground.
11. Have an assistant meet each organization upon arrival and escort it to its camp site, furnishing it a chart card or an information slip, giving the information contained on reverse side of card.
12. Don't forget to obtain:

Tentage.	Straw.	Drivers.
Lumber.	G. I. water cans.	Tent poles.

Nails.	Telephone material.	Tent pins.
Tools.	Telegraph material.	Sibley stoves, in cold weather.
Forage.	Rope.	Incinerators.
Crude oil.	Wagons.	Blank forms.
Fuel.	Teams.	

13. Don't forget to construct:

Sidings.	Forage yard.	Organization camp sites.
Ramps.	Latrines.	Roads.
Corral.	Telephone lines.	Baths.
Fuel yard.	Telegraph lines.	
Storage yard.		

Sizes for Camp Pits, Trenches, etc.

398. Kitchen Incinerators:

A pit 5 feet long, $2\frac{1}{2}$ feet wide, 6 inches deep at one end and 12 inches deep at the other. Earth banked around the top of pit. Top bottom and sides lined with stones the size of a fist or larger. HOT fire kept burning in pit at *all* times.

399. Kitchen Pits:

A hole 2 or 3 feet square at the top and 3 or 4 feet deep. Cover with boards and make flyproof. Used for solid, or solid and liquid refuse. For liquids use a smaller hole.

400. Latrines:

A trench 5 feet long, 1 foot 2 inches wide, and of a depth consistent with the length of the stay at that camp, not less than $1\frac{1}{2}$ feet. Should have a cover with traps. Should be flyproof.

401. Ditches for Tents:

About 8 inches wide, 2 to 4 inches deep, half within and half without the vertical tent wall, with wall pins in the ditch.

402. Holes for Upright Tent Poles:

If poles are too long they should be sunk in the ground a few inches by means of a pick. Tent loops should reach wall pins.

Important Things to Remember

403. Tentage:

Pins: Guy pins should be driven so that they point toward the tent at an angle a little greater than 45 degrees.

Wall pins should be driven nearly vertically, sloping slightly from the tent.

The use of the bayonet in driving pins is prohibited.

Tent ropes: Should be loosened during rainy weather, heavy dews or at night.

By interlacing guy ropes interval between tents can be reduced 6 feet.

Ditching: The center of the ditch should be directly under the wall, half of the ditch inside and half outside of the tent.

Rotting: Whenever canvass comes in contact with earth, tentage will rot.

404. **Latrines:**

Arrival: Constructed immediately after arrival at camp.

Departure: Trenches should be filled up and marked. Tents are last thing taken down and loaded.

Inspection: Inspected daily by Regimental Sanitary Officer and Captain of company.

405. **Kitchens:**

Arrival: Fires made and meal prepared immediately after arrival at camp. Incinerators or pits constructed at once.

Departure: Fires dumped from range as soon as breakfast has been cooked.

Sanitation: Kept clean and free from flies. Use lime.

Inspection: Inspected daily by Regimental Sanitary Officer and Captain of company.

Camp Sanitation

406. **Necessity for:**

One of the greatest difficulties encountered in handling large bodies of troops in the field is the prevention of contagious diseases in camp. The records of every war show more deaths from disease than from bullets, due partially to the breaking down of the system on account of hardship and exposure, but also largely due to improper camp sanitation.

407. **Duties of Officers:**

Every officer in command of an organization should supervise very carefully the sanitation of that organization's camp. This applies to every commander from the camp commander down to the commander of the smallest unit or detachment.

To begin with, an officer in command of a separate organization should, if possible, select a proper camp site; then he should conform to the recognized methods of pitching camp, such as locating his latrines and picket lines as far as possible from his kitchens, taking proper steps as to the disposal of garbage and other refuse, seeing that water for his troops is obtained

from an uncontaminated source and one that will not become contaminated, seeing that his own troops do not contaminate the water supply of other organizations, and see that commanders of units maintain rigid sanitation in their own camps.

By daily inspection of the camp of his organization each officer should assure himself that all of his orders are understood and are being enforced; each company camp being policed, free from refuse and litter on the ground, tent walls being looped up, bedding aired daily, tents swept out, kitchens clean and free from flies, fresh meat covered and on ice, kitchen refuse properly disposed of, kitchen incinerators properly constructed and having *at all times* a good fire in them, ground around kitchens clean and free from slops, especially around kitchen pits.

The same cleanliness must be maintained around the officers' tents and messes as required around the companies and enforced among the men.

408. Personal Cleanliness:

Each officer and enlisted man should bathe once each day in camp, and should frequently change his underclothing. The hair should be kept cut short and frequently washed. The teeth should be cleaned thoroughly with a toothbrush. The hands should be washed when a man returns from visiting the latrine and always before each meal, finger nails should also be cleaned before each meal.

409. Refuse:

Kitchen slops and refuse should be burned in the company incinerator. If the incinerator has been properly constructed all liquid and solid refuse can be disposed of in a sanitary manner. Liquids, such as dish water, slops, etc., should be slowly poured on the stones all around the edge of the incinerator. These stones are usually hot and will evaporate the liquid and leave the solid matter, which is soon burned. Solid food such as refuse from the mess kits should be dumped on top of the logs and will soon be burned. Tin cans, after being opened and their contents removed, should be thrown on the logs; this melts the solder on the cans and lets them fall apart, when all of the edible matter will burn and the tins can subsequently be removed. It is essential that a hot fire be kept burning in the incinerator at all times.

If company pits are used instead of incinerators care should be taken to keep them covered and not to spill slops on the ground in pouring into the pit. If solid matter is thrown into the pit, it should be burned out each morning with crude oil and straw furnished by the quartermaster, if pits are used only for liquids they should be filled in with earth before they become too full. One of the easiest and quickest ways of making a kitchen pit is by using a post hole digger.

410. Litter:

All litter, such as papers, cigar stumps, pasteboard boxes, etc., should be gathered up each morning and burned. Ashes from the incinerator should be hauled away daily.

411. Latrines:

In camps of any duration latrines of a semipermanent type are usually constructed by the Quartermaster Corps and troops are merely required to keep them in a sanitary condition. To do this crude oil, straw and lime are furnished. The crude oil and straw are for burning out the trench once each day, and organization commanders should see that this is done. The lime is for whitewashing the seats and sides of the box that covers the trench and for sprinkling on the ground inside the latrine and in the urinal trough. Some of the lime can be used to advantage around the kitchen.

When camp is established for only a day or so it will be necessary for each company commander to construct his own latrine. This should be a trench about 5 feet long, $1\frac{1}{2}$ feet wide and from 2 to 4 feet deep and should have a cover with traps arranged so that they will keep out flies. Two or three 12 inch boards, 6 feet long and 1 inch thick with short 2x4s will make a cover that can be easily transported. The men using this trench lift up a trap (or cover) and straddle the opening, closing the trap after using. A common tent or brush screen will afford protection. In case no cover is available a small paddle should be made and the deposit should be covered with earth. Lime should be used both inside the trench and on the ground around. It is well to put a lantern in latrine at night.

Latrines must be so located that the drainage cannot pollute the water in the vicinity.

412. Urinals:

A urinal can should be placed in the middle of the company street at night. Its location might well be marked by a lantern.

The can should be emptied each morning and burned out with crude oil and straw.

413. Mess Kits:

A cleanly man wants a clean mess kit. Organization commanders should furnish two pots or buckets of boiling water at every meal with which to clean the kits. One pot should contain soapy water, the other clear water; in the former should be placed a stick with a cloth swab on one end. Refuse should be disposed of by the man and he should then dip kit into soapy water and swab it off, rinse it in clear water, dry it on wiping rags provided for the purpose, and then put it away in his haversack.

These pots should be suspended on a rack over the fire of the company incinerator. After the men have finished washing their mess kits the water in these pots should be slowly poured on the stones of the incinerator or put in the kitchen pit. It must never be poured on the ground.

414. The Kitchen:

Ground: The ground around the kitchen should be free from refuse and should be sprinkled with lime each day.

Tables: Any tables, boards, boxes, etc., from which food is served should be scrubbed with hot soap suds and water after each meal.

Pans, Pots, etc.; Must be washed with hot soap suds and water, rinsed, and wiped dry.

Cloths: There should be two sets of wiping cloths at the kitchen, one set for the use of the men for drying mess kits and the other set for the use of the cooks. All cloths should be washed out after each meal, being boiled after supper and hung on the line to dry.

Hot Water: There must be plenty of hot water in the kitchen. Water must be provided for use of the men at each meal and a couple of buckets for the use of the cooks. Make use of the fire in the incinerator and the field range. The cooks must not use the water set aside for the use of the men for washing mess kits. Dirty water is poured on the stones of the incinerator, never on the ground.

Preparation of Food: Food must be prepared in a clean and sanitary manner and cooked in clean utensils.

Personal Cleanliness: Cooks must be clean in their habits,

wear clean clothing, and keep their hands clean. They must never be permitted to sleep in the kitchen.

Care of Rations: Rations should be kept in the store tent out of the dirt and dust. Meat must be kept on ice and covered and protected from flies at all times.

Flies: Flies about a kitchen indicate a carelessly kept kitchen. If there is no refuse about for flies to feed on there will be no flies. Powdered borax, sprinkled on the breeding places of flies (such as manure piles) is said to prevent propagation.

415. Water:

General Remarks: Cistern water and ice water made from natural ice is very often impure; ice water made from artificial ice is usually pure. Clear, cold spring water, though pleasant to the taste, is sometimes impure, depending on its origin; freely running water, not contaminated for five or six miles, is usually safe to drink.

To Purify Water: Filtering water does not purify it, merely clears it of dirt or sediment. The best way to purify water is to boil it for five minutes or more, then cool and aërate it; if it is then filtered it becomes quite pure; but filtering is not essential. If there is not time to boil water and cool it, purification may be obtained by dissolving $\frac{1}{3}$ gramme of alum in each gallon of water, stirring well, then allowing the sediment to settle. Chlorine tablets are sometimes used. The British use just enough permanganate of potash to give it a slight pinkish color after standing twenty-four hours.

Running Streams: If water from running streams is to be used, it should be used in the following order: Drinking water from furthest up stream, then cooking water, then water for animals, then bathing. If more troops are down stream, the last two named should be below such troops.

416. Tents:

Ditching: Tents should be ditched as explained in par. 476.

Driving Pins: For tents having flies use the long pins for guy pins, the short pins for wall pins.

417. Picket Lines:

Picket lines should be policed daily, kept clean and sanitary, manure removed or burned to prevent accumulation of flies. They should not be located near the kitchens. The drainage from them must not be able to pollute the water supply.

They should be raised and ditched to ensure good drainage.

CHAPTER VIII

PRACTICE MARCHES

418. In all field training practice marches form a part. They are made with a view to hardening the men and animals and keeping them in good physical condition, and for the purpose of instructing the officers and enlisted men in marching, camping, cooking, etc., and in the methods of handling troops in campaign, teaching them the principles of tactics, including the service of security and information.

419. No march should be taken that will not teach the officers and enlisted men something about the above. In other words, do not order a march just for the sake of making the men work, have some definite object and let them know what it is, do this by explaining to your junior officers, then see that they explain the object to their subordinates.

420. Marches should not be too long at first. The commanding officer should use good judgment in this matter, he should be familiar with the requirements of Drill Regulations and Field Service Regulations. To insure good marching, organization commanders must see that their men are well cared for and that, in mounted organizations, the animals receive the best of care.

421. If the command consists of a regiment an order should be issued the night before the march giving all of the necessary details for breaking camp.

Breaking Camp

422. The time for "Reveille," "Stables," and the "General" should be designated, and should be based on the length of the march, so that, when practicable, troops may arrive at the camp for that day at about 11 A. M. An infantry regiment making a ten mile march may break camp at 7 A. M.; for a fifteen mile march it may break camp at 6 A. M. and arrive at the new camp between 11:30 A. M. and noon. Seasoned infantry can make an eighteen mile march, in good weather between reasonable hours for breakfast and dinner, unseasoned infantry should stop for lunch for all over a fifteen mile march.

423. Allowance should be made for the condition of the weather and roads. Troops march much faster in cool weather than in hot; roads heavy with mud or dust, or excessively hilly, reduce the rate of march. Troops should not, ordinarily, be marched past the noon hour unless within a short distance of the new camp site. It takes from forty minutes to an hour to prepare dinner after arrival at camp.

424. Troops should be formed at reveille *under arms*, arms stacked and left until the organization is ready to fall in for the march. The Supply Company wagons or trucks go where directed by the officers of that company and at the time directed by orders. The various companies pile their property in two piles at the head of the company street, one pile being for baggage and the other for rations.

425. If wagons are assigned to companies they should be at the head of the company street at the assembly for reveille, animals having been previously fed and watered. They should be loaded with heavy baggage before the "General" is sounded.

426. As soon as breakfast is cooked the fire in the field range should be dumped and the range allowed to cool.

427. Salted meats (bacon) should not be fed for breakfast before a long march, they make the men resort to their canteens all during the march. Canteens should be filled before the march begins.

428. Men should relieve themselves before the "General" is sounded, therefore the rear tent should be the last one to be taken down and the rear filled up just before the start.

429. At the last note of the "General" tents are struck, folded, and placed on the proper pile; if shelter tents are used they should be rolled and placed in line in rear of the stacks. Wagons of the Supply Company are loaded as soon as they report to the company.

430. Camp is then policed by the entire company, the rear and kitchen pits filled with dirt, rubbish placed in a pile and set on fire. The supply sergeant, cooks, artificer and company clerk report to the officer in charge of the train, he may authorize one man, (usually one of the cooks) to ride on each wagon in addition to the driver.

431. Before leaving camp, the Commanding Officer, accompanied by his staff, inspects the entire camp site, and causes any

faults in policing to be corrected before beginning the march. In case fires have been left, he may leave a mounted man behind to remain and watch them for as long as may be necessary, then to catch up with the column.

432. Under the present organization the transportation assigned to organizations at minimum strength is as follows:

Organization.	Combat train	Rations.	Sanitary train.	Baggage.
Regiment Infantry	8	6		5
Regiment Cavalry	4	13		16
Regiment Artillery		11		3
Regiment Engineers	16	8		3
Field Bn. Signal Corps	9	3		4
Ambulance Company			8	
Field Hospital			14	

In time of peace wagons of the combat train, when so authorized, may be used in carrying such additional baggage for the officers and enlisted men of the organization as is deemed necessary by the commander, or may be assigned to companies, troops, batteries, etc., when these are detached and marching independently from their regiments.

433. Formerly wagons were assigned to companies and battalions within a regiment but this has been changed by the latest regulations of the War Department. It is possible that this may be followed in the future in various regiments and each company have its own wagon, where sufficient are on hand in a state and no combat train is used.

434. Under the present organization the allowance to a company of infantry will be $\frac{1}{4}$ of a wagon for baggage and $\frac{1}{3}$ of a wagon for rations, the property to be packed on the wagon as directed by the officers in charge of the baggage and ration sections of the Supply Train.

435. It is also necessary for officers and men to know how to pack a wagon when one is assigned to the company for its individual use. If a wagon has been so assigned it is advised that this wagon be fitted for field service by means of leather containers for tools, straps to hold tent poles; both being fastened permanently to the side of the wagon. A small chest

can be made for the clothing, bedding, etc., of the teamster, it should be fitted in the front part of the wagon. A water keg, with faucet, can be fastened to the back of the wagon by means of iron straps; this keg is attached beneath the wagon. Iron hooks for buckets and lanterns should be fastened beneath the wagon. Some kind of an oil can should be slung under the wagon, in case oil lanterns are used.

436. All heavy articles are placed in the bottom of the wagon. Those needed first should be at the rear end of the wagon.

Place forage in the forward part of the wagon under the driver's seat, also ammunition. Next put field desk, boxes of tent pins, officers' field chests, boxes of rations, ration chests, etc., in the order named. Field range at or near the rear of the wagon.

Place tentage, closely folded and tied, on top of the articles just named and at the forward end of the wagon, reserving the rear part for gunny sacks containing pots, pans, tent pins, etc., articles that will not be harmed by being placed on top of the field range. G. I. water cans should be packed with small articles and stood on top of the field range. Officers' bedding-rolls and the surplus kits of the men are placed on top of tentage. The tail gate of the wagon should not be allowed to be lowered.

Blanket rolls of the men when carried on the wagon should not be doubled after being rolled, but should be tied in squad bundles, labeled, and placed on top of the load, crosswise of the wagon. Tent poles should be carried on the sides of the wagon in the leather straps provided for the purpose; in case there are no straps use bailed hay wire. Stovepipe joints should be placed in a bag and lashed to the rear of the wagon above the feed box. If Sibley stoves are carried they should be nested and placed on the bottom of the wagon near the field range or swung on a chain under the feed box. Tent pins should be placed in sacks, never rolled inside of tents.

437. To lash the load the following has been found to be satisfactory. Take a $\frac{3}{4}$ inch rope 75 feet long and attach to the front bolster on the right side of the wagon, pass diagonally over the load to left rear and attach to the tail gate ring, pass in rear of tail gate and fasten to right tail gate ring, then diag-

onally over the load to the left front and fasten to the left front bolster. The remaining rope should be passed back over the load and fastened at the rear. If the lashings are drawn tight and the wagon is properly loaded the load should not shift and no trouble should be had with the wagon.

The bows should not be included in the lashing of the load. When lashed the cover should be put on and securely tied down over the load.

438. All space should be utilized. Boxes should be made to fit tightly in the bottom of wagons, intervening space should be filled with articles that cannot be crushed. The "jockey box" is for the teamster's tools, axle grease, etc.

Regiment on the March

439. On good wide roads the regiment marches in column of fours or squads; on other roads it should be formed in column of twos. The captain and one lieutenant should place themselves *in column* at the head of the company, the other lieutenant in the column at the rear of the company. The first sergeant should march in column abreast of the leading guide; in column of twos the leading guide should be in rear of the captain, otherwise abreast of him. File closers take their place in column as the captain may direct in case the road is narrow or unsuitable for them to march on the flank.

440. The regimental train forms in rear of the last company, maintaining a distance of about one hundred yards from this company, unless the size of the command makes it necessary for all units to keep closed up or the train is ordered to form in rear of other troops.

441. Troops should march 45 minutes the first hour and rest 15 minutes, allowing the men to relieve themselves and adjust their equipment. Thereafter the march should be for 50 minutes, with a halt of 10 minutes at the end of each 50 minute period of marching. The commanding officer should use his discretion in selecting halting places.

442. Marching troops are advised not to drink from their canteens until after the second halt. They should not eat food while on the march, but should wait for the halt when they may be directed to eat lunch.

443. When a regiment marches alone, and it is not absolutely necessary that organizations be kept closed up, the following is suggested:

(a) Battalions should be separated by a distance of at least 40 yards.

(b) When it is desired to halt the column, the signal for "halt" to be sounded on the bugle. Each captain will *instantly* give the proper command to halt his company, each man halts in place. If it is intended to have the men fall out, the Colonel causes "guide left" to be sounded on the bugle. The men remain as halted until "fall out" or "forward" is sounded on the bugle.

(c) One minute before the column is to be put in march, the Colonel causes "guide right" to be sounded on the bugle. The command "forward march" to be sounded on the bugle when the entire column is to be placed in march simultaneously.

(d) The men retain their rifles in the position they may be carrying them when the "halt" is sounded, or they may bring them to the ground, as the individual may choose.

(e) The regimental train obeys the signals of the commander of the train, and not the bugle calls.

(f) Battalion commanders should be held responsible that there is no undue lengthening of the column or straggling in their battalions.

(g) One minute before the "halt" is to be sounded the leading element should be cautioned to shorten the step slightly.

444. During a hot and dusty march if the commanding officer sees a chance for the men to fill their canteens after the second halt, he should direct that this be done, increasing the length of the halt if necessary. A staff officer should be directed to have this done *by company* and should see that it is done as ordered. Each company commander should detail one man in each squad to take all of the canteens of that squad. Order and system is maintained by the staff officer at the place where water is obtained. For mounted troops an opportunity to water both animals and men after the second halt should not be overlooked.

445. The Colonel should occasionally allow the regiment to file past him, in order that he may see the condition of the men, the distances maintained, and how the regimental train is being con-

ducted. This should be done just prior to a halt, the Adjutant and trumpeter remaining at the head of the column to sound the halt on time. The Colonel should regain his place at the head of the column during the halt after the men have cleared the road.

446. An ambulance should follow the last company, ahead of the regimental train, of which it should form no part. Any man who may be taken sick during the march should be given a note to the Surgeon and told to fall out and await the arrival of the ambulance.

447. If a "nooning," or rest for the noon meal, is necessary the organizations should be notified the night before. A substantial meal should be prepared and loaded on the rear of one of the wagons of the ration section where it can be easily obtained, in case the train does not march with the regiment these lunches should be issued to the men and carried in the haversack. For a long march a cold meal is not recommended. Troops should be allowed from one hour to an hour and a half for lunch.

448. On the march the Regimental Surgeon is mounted and marches just ahead of the ambulance in rear of the last company. He should be accompanied by an orderly. He should always have a surgeon with the ambulance in case he leaves for any purpose. The remainder of the sanitary detachment usually marches with the battalion units.

449. Sick men who fall out on the march are placed in the ambulance; when this is filled they may be assigned to the field train, or other transportation. Men weak or footsore may be relieved of their equipment and permitted to walk in rear of the ambulance. A man falling out on account of sickness or injury is given a pass by his company commander to the medical officer in rear, showing the man's name, rank, and organization. The medical officer returns the pass, showing the disposition made of the man.

450. The arms, personal equipment, and clothing of men who fall out, are carried with them. The horse, saber, and horse equipment of a mounted soldier who falls out, are, if he is admitted to the ambulance, taken back to his troop or organization by the non-commissioned officer who accompanies him.

451. Upon halting for the night all men who are physically fit are returned to their companies by the medical officer, and

a report made to the company commander showing the men that have and those that have not been returned to their commands.

Mounted Organizations

452. On ordinary marches water before starting unless it is known there will be a chance to do so within an hour.

453. Halt at the expiration of the first fifteen minutes and adjust saddles. After resting ten minutes, resume the march, and thereafter stop for five minutes at the expiration of each hour, always adjusting saddles and packs. If a halt is made at noon, remove saddles and packs unless in the enemy's country. On long or difficult marches much time may be saved and fatigue avoided by having the men dismount and lead at intervals, particularly when going down steep grades.

454. If the road is hard, march on the side if conditions permit. Hard roads and fast gaits kill off more horses than deep mud and steep hills. The condition of the roads, condition of horses, weather, and the purpose of the march will determine the rate of march.

455. While under pressing demands units as large as a regiment can march fifty miles or more in a day, it is not advisable to average more than twenty or twenty-five miles under ordinary circumstances. In hot weather it is best to march during the cool of the morning and evening. Horses must be kept shod, must be well watered, fed, groomed, and must not be road-fouled by too rapid marches over hard roads. They should never be allowed to cool off too rapidly or suddenly and should be blanketed in cold weather.

456. Allow no man to leave the column unless by permission and for good cause. Place a reliable man at the rear of the column to enforce this requirement and to keep the elements closed up. After crossing streams or difficult places, slacken the gait or halt until those in rear catch up. Do not allow them to increase their gait for this purpose.

CHAPTER IX

WAGON TRAIN

(See also Chapter VIII)

457. The Regimental train is divided into two sections or trains, the Combat train and the Supply train. The Supply train is divided into two sections, the Ration section and the Baggage section. The number of wagons assigned to a regiment is stated in paragraph 460.

458. To properly handle a wagon train on a long hard march is an art to be acquired from experience; but the following remarks may be of assistance to one who is not familiar with this duty. The train is commanded by the Supply Officer and the personnel of the Supply Company furnishes the necessary drivers, wagon masters, etc.

459. Before starting, the commander of the train should assemble all of the wagon masters and the drivers, and give them the following instructions:

(a) Drive at a walk.

(b) Do not attempt to keep jammed up close to the wagon just ahead, keep an even gait, closing up if necessary at a halt. Do not lose distance.

(c) Always pull off to the right of the road on halting. If a team is about to play out on a steep hill, pull this team off the road to the right before this team stalls, allowing the rest of the train to file by; later the commander of that section will direct how this team will be assisted. Never under any circumstances attempt to take a hill at any gait other than a walk.

(d) Open out going up a steep hill and close again on the down grade.

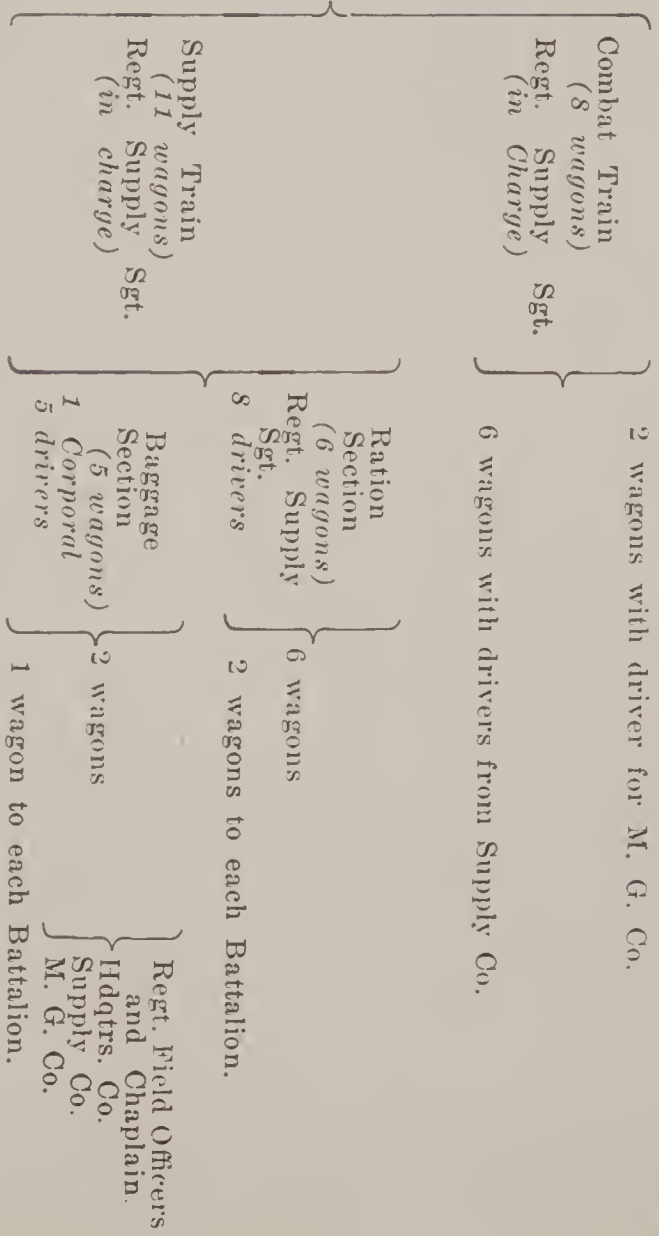
(e) The leading wagon will take an even gait, setting the pace for the rest of the train.

(f) Any driver abusing his team will be relieved as a driver and required to walk.

(g) Use the brake on down grades and remove it at the proper time. Set the brakes at every halt.

460. The following assignment of transportation and personnel may be taken as a guide for the regimental train of an infantry regiment:

Regt. Supply Officer.
(19 wagons)
 Regimental train.
(in charge)
 1 Officer of
 Supply Co.
(Assistant)



For other arms of the service this may be used as a guide by making the necessary changes according to the number of wagons allowed for the train. In case combat wagons are not needed for ammunition they may be assigned to the supply train.

461. The commander of the train should have it made up by section, the combat section should be placed in rear of the supply section unless ammunition will be needed before camp is made. In the supply train the ration section should precede the baggage section. If possible, the wagons should be grouped by battalions. If conditions require heavy loads to be placed at the head of the column, the most experienced driver should be in charge of such wagons.

462. The commander of a train should constantly ride the length of his train, always being where his presence is most needed. The same is true for the assistants in charge of the different sections of the train. The commander and his assistants should constantly be on the lookout to see that:

Drivers do not lash their teams and attempt to take hills at a trot.

Drivers set their brakes on halting and going down hill.

Drivers do not allow their teams to stall and block the road on taking a hill.

No team becomes played out.

Not more than 1 man (besides the driver) rides on any wagon.

463. In case the road is bad or excessively hilly the commander should request that a company be detailed to accompany the train to assist when necessary. Each driver should have a long rope handy at all times. On a very bad hill one end of this rope may be attached to the end of the tongue of the wagon, the end run well to the front and manned by the men of the company detailed to assist, each man walking up the hill and exerting a little strength on the rope. Mounted men should never attempt to do this, as it is not successful.

464. A team should never be allowed to play out, the load on that wagon should be distributed among other wagons of the section before such a point is reached. Drivers should be required to water their teams when opportunity permits; this is

best done with buckets allowing one bucket of water to each animal. They should be watered once on an ordinary march, if possible, usually after the first or second hour of marching.

Method of Distribution for Loading

465. The non-commissioned officer in charge of the Combat Train is responsible for the proper loading of the wagons of his train. For this purpose he should assign 2 wagons to the Machine Gun Company and 2 wagons to each battalion of the regiment. He should receive and give receipt for all ammunition turned over to him by the different organizations. No wagon should be loaded with more than 2,465 pounds of freight.

466. This ammunition should be turned over to the commander of this train the night before the march and should be distributed and loaded that night. It may be left on the wagons until it is needed or is ordered turned over to organizations. Special equipment is also carried on these wagons.

467. The commander of this train should find out from his commanding officer the time and place that his train is to form and he should see that it is at that place at the designated hour. He will report the fact to the commander of the train.

468. The non-commissioned officer in charge of the Supply Train is responsible for the proper loading of the wagons of his train. For this purpose he should have 1 wagon assigned to each battalion for baggage; 2 wagons for baggage should be assigned to Headquarters, Headquarters Company, Supply Company, and Machine Gun Company. The six ration wagons should be carefully loaded with the rations of the regiment.

469. He should find out from his commanding officer the time that camp is to be broken and will notify his subordinates and see that they have the wagons in their charge ready to be loaded at the proper time, usually immediately after reveille. He will have them supervise the loading and will personally see that the loading proceeds without delay. Wagons in this train will not be loaded with more than 2,765 pounds of baggage or rations.

470. The commander of this train will find out where his train is to be formed for the march, and at what time. He will notify his subordinates of this and will see that they have their

sections at the proper place at the designated time, the ration section being in front of the baggage section. As soon as his train has reached its place he will report the fact to the commander of the train.

471. In case the wagons of the combat train are not needed for ammunition and these wagons have been assigned to the Supply Train and assigned to the sections of this train it may be possible to assign a wagon to each company for its use, the sections being numbered and all company wagons being from the first section; the remaining wagons being in the second section and assigned to regimental headquarters, battalion headquarters, headquarters company, supply company, and machine gun company.

472. The non-commissioned officer in charge of each section will assign the wagons of his section, will have the wagons at the proper place for loading by reveille, this is usually at the head of the company streets. These non-commissioned officers should have their subordinates give general assistance with the loading and as soon as wagons are loaded these subordinates should supervise the formation for the march. The non-commissioned officers in charge of sections should ascertain the place and time for the formation of their sections for the march and have their sections at this place at the proper time. They will notify the commander of the train when their section is in place.

473. The commander of the train and his assistant will give general supervision to all of the foregoing. The Supply Officer will designate the time and place for the formation of the train. He goes wherever his presence is necessary.

Arrival in Camp

474. The wagon train should be halted before entering the new camp and should remain so until the various organizations are located. The commander of the train will go ahead and find the best way of entering the new camp and where his corral is to be located. He then returns to the train and directs the non-commissioned officers in charge of the parts of the train, to conduct their trains or sections to the proper places and unload. The combat train, unless otherwise ordered, will proceed to the corral and unhitch, the supply train will proceed under the direction of its commander to the proper organiza-

tions and be unloaded, the wagons are then conducted to the corral and unhitched.

475. If the wagons have been assigned to organizations and the camp ground is limited the wagons may be unhitched at the head of the company streets and allowed to remain there over night; the drivers will take their teams to the corral or picket line. If this is done the wagons may be backed down towards the kitchens, to within about ten yards, wagon being in prolongation of the company tents with the pole pointing towards the officers' tents. In case of necessity the animals may be tied to the wheels of the wagon, one to each wheel.

476. Auto trucks are now being used to good advantage and are replacing animal drawn vehicles. These trucks are used in Supply Trains and a number may be assigned to a regiment to replace the wagons in the Regimental Train. In this latter case the trucks are loaded under the supervision of the officers of the Supply Company. They are apportioned to the various units by the Supply Officer.

CHAPTER X

RAILROAD TRANSPORTATION

477. When making a movement of troops by rail Article VI, Field Service Regulations should be referred to. This chapter deals with the details of such a movement and may be used as a guide by both mounted and dismounted organizations.

478. Order in Which Trains Are Made up:

1. Flat cars—containing guns, carriages, wagons, pontons, etc.
2. Box cars—containing property.
3. Stock cars—containing animals.
4. Box car—containing forage.
5. Baggage cars—the last one containing travel rations, with open end to the rear.
6. Passenger coaches or tourist sleepers.
7. Standard sleepers for officers.
8. Kitchen cars—in case kitchen cars are used it will be found advisable to place them in the center of the part of the train used by the men, rations being stored in a baggage car adjoining.

479. Loading Animals in Cars:

Examine the cars for broken boards in the floor, insecure sides, projecting nails, etc. The floor should be clean. After the examination the floor should be covered with sand or sawdust.

Load as many animals as possible in each car, except in hot weather when allowance should be made for air space.

In loading animals use the railroad platform, or the loading ramp found at railroad stations, or make a ramp that is well supported and has strong sides. Lead the animals up the ramp by means of halters and straps and take them into the car, then remove the halters and straps. The first animal should be led to one end of the car and the second to the other end, leaving the center of the car for the last animals loaded. Arrange the animals so that the alternate ones face in the same direction. The most gentle animals are loaded last in each car.

Do the loading quietly, and have the animals follow one another promptly so as to avoid delay. In some cases it may be necessary to blindfold an animal before he can be led into the car. An obstinate animal can be made to enter by holding its head up, twisting its tail, and pushing it by main force into the car. Before loading the car see that the door on the farther side is closed and fastened. After loading is completed close and fasten the door where animals enter.

When cars contain hay racks and water troughs see that these are in good condition and fill the racks before loading. Animals should be unloaded and exercised as a rule once in twenty-four hours. When stock cars are used and the animals are fed and watered twice a day, once in two or three days is usually sufficient for unloading for exercise, depending upon the temperature. The state laws for shipping stock should be consulted and complied with.

In shipments of less than a carload lot a barrel of water should be placed in the car and blocked to prevent splashing.

480. Loading Wagons on Cars:

Wagons may be loaded on cars in various ways. If the movement is hurried and there is a possibility of having to unload wagons and use them immediately for a march they should not have property removed from them but should be run on the cars, tongues removed, and should be lashed and blocked. In this case the wagons are not knocked down.

When time is not limited and it is so desired wagons may be loaded in the following manner: Remove the beds from the running gears and take off the rear end gates. Get a 36 foot flat car, or even a longer one. Place the first bed in one corner of the car, its length parallel to the car, so that its side will come out to the stakes or the places for the stakes on the side of the car. Take the second bed, reverse it so that the front end will be opposite the rear end of the first wagon, turn it bottom up, and place it partly inside and partly outside of the first bed, the inner sides being close together. This arrangement forms a box with closed ends which can be filled with parts of the body and running gear. Place the third and fourth beds, similarly arranged, alongside of the first and second, and continue the same arrangement to the other end of the car. In this way 12 beds can be put in the first layer on a car.

Arrange the second, third, and fourth layers similarly, and secure the beds by stout stakes and wire. Forty-eight beds, with parts, can be shipped on one flat car, the running gears being placed in a box car. Put back all nuts in their proper places. Wagons that have been used should never have the bodies knocked down and loaded in box cars, because in endeavoring to take off the nuts, which are sure to be rusted, the outside braces and inside straps are sure to be twisted and the bolt ends are broken off, rendering the wagons unserviceable. By loading in the above manner, no damage is done the bed or the running gear and the wagons are easily set up when the destination is reached. It is not necessary to number the beds, running gear, etc., except when wagons of different patterns are shipped. If tunnels are on the line of the road, load only three layers, or 36 beds to the car.

If cars containing stock and wagons accompany the regiment and it is necessary to run the train in several sections, the cars of stock and wagons should be in the first section and should be accompanied by a sufficient number of men from the Supply Company, and a detail, if necessary, to unload and care for the stock and wagons, so that when the regiment arrives there will be no delay in moving property to camp.

481. Loading Ambulances on Cars:

Ambulances may be loaded on cars as described for wagons.

If time permits and it is so desired ambulances may be knocked down and loaded in the following manner: First get a flat car 36 feet long by about 9 feet wide. Take the beds off of the running gears by unscrewing nuts from bolts that hold the sills of the beds to the running gear. Take off the rear steps. Six beds can be placed on the car by taking the first bed and placing it in one corner of the car, its length parallel to the car, the side of the bed coming out to the stakes, or the places for the stakes on the side of the car. Place the second bed alongside of the first, allowing it to slip back 2 inches on account of the sills. Arrange the other four beds beside the first pair, well closed up; then put in stout stakes and cover the tops of the ambulances with paulins or old canvas, as a protection to the tops from sparks. It is very important that the nuts should be put back in their proper places. Secure the water tanks on the ambulances, and place the running gears

in box cars and number them according to the number on the ambulance to which they belong, if the ambulances are of different makes.

For a short journey the wheels may be taken off, axles unyoked from springs, and rear steps removed. For axles substitute a piece of hard wood, which should be longer than the width of the ambulance. Crate the wheels and put inside of ambulance, bracing them so that there will be no danger of damage to the sides of the ambulance.

482. Loading Property:

There should always be an officer of the Supply Company in charge of the loading of property, unless one is not present, in which case an officer should be detailed for this duty from a company. Box cars should be assigned so that there is plenty of room for all property. The officer in charge should see that property is delivered to the proper cars, property of organizations being kept together as much as possible and handled by the details assigned for such work. The property of the battalions should be segregated and kept together as much as possible so that there will not be great confusion when it is unloaded and in order that it may be delivered promptly at the proper place and to the proper company. Property that is liable to be crushed should be placed on top of heavy property. In case more than one car is used the designation of the companies to which property belongs should be chalked on the outside of the cars. When all property is loaded the doors should be closed and locked.

Property may be loaded and unloaded from both doors of a car at one time, but care should be exercised that property of different organizations is not mixed when this is done.

483. Loading Men on Cars:

The coaches having been inspected by the proper officers and found satisfactory they should be at once placed at the disposal of the troops. The coaches should be clean, well supplied with drinking water and water for washing purposes, with clean toilets and toilet paper, plenty of clean linen, and sufficient in number to accommodate the entire command.

The Supply Officer should be informed of the number of men in each organization. He should obtain from the railroad agent the numbers of the different cars and should ascertain the

number of men each car would accommodate. He then divides the coaches among the organizations so as to have all of the men of an organization in one car if possible, assigning to the different organizations the number of seats or berths allowed that organization. He may tabulate this if he has time and furnish the information to the organization commanders before they arrive at the train. He should mark on the steps or side of each coach the designation of the organization that is to occupy that coach with number of men of that organization it will accommodate.

The coaches should be assigned to organizations in the order in which these organizations will arrive at the train, but where organizations are made up of different races or nationalities those of the same race should be grouped together and assigned to cars in the same part of the train.

The different organizations should be marched to their respective coaches and halted facing the coaches and should be divided as directed unless this has been done previously; an officer should be in charge of each section of the company when it is to occupy different cars. The organization commander sees that only the number of men designated are assigned to each car, he may verify this number by looking at the side or steps of the cars.

The men, preceded by an officer, should enter the coaches when directed by the organization commander and at only one entrance. The officer assigns the men to seats or sections as they enter, 3 men to a double seat or section. Men should remain in the seats to which they are assigned until all are seated, changes can then be made by making application to the ranking non-commissioned officer in charge of the car.

The officer will see that the ranking non-commissioned officer understands that he is in charge of the car, is responsible for the men and the discipline in the car, that a guard is promptly posted at each door with orders to allow no enlisted man to leave the car for any purpose without permission from one of the company officers. No men should be allowed to ride on the platforms, steps, or tops of the cars; this is important as a preventative of injury. After the train starts the men may be allowed to visit in cars other than their own.

The organization commander should see that all of his men have seats or berths assigned to them and that the non-commissioned officers understand their duties en route.

Officers should have their belongings placed in the cars set aside for their use, they should remain near their companies until the train starts. The organization having been cared for they may then proceed to their car and obtain their assignment to seats or berths.

484. Conduct of Train en Route:

The ranking *line* officer on the train is the commander of the train and should have a copy of the itinerary and the stopping points en route. The train is run by the employees of the railroad. Usually there is a representative of the railroad on board with authority to settle any complaints against the company. If anything is wrong with the equipment, or the contract is not complied with, he should be requested by the commanding officer to correct such error.

The Supply Officer accompanied by the representative of the railroad and the conductor should check the number of persons aboard the train immediately after the train starts, they should see that the numbers check with the transportation.

The Commanding Officer, Supply Officer, and a representative of the railroad should inspect the entire train each morning, making notes of any damage and the condition of the cars. Company commanders should be present daily when the cars assigned to the men of their organizations are inspected. During this inspection the company commander should accompany the train commander through the cars assigned to his company.

Cars should be policed each morning before inspection and after each meal. They should also be policed before an organization detrains.

Messing En Route

485. For railroad journeys exceeding forty-eight hours (including allowances for delays), and the number of men to be transported exceeds thirty, one kitchen car for each two hundred men or fraction thereof should be furnished; if a kitchen car cannot be obtained a baggage car properly fitted up with ranges will be used. The Contractor furnishing kitchen car should furnish full mess equipment, cook, cook's helper and ice for the preservation of supplies. The garrison ration should be used.

486. A mess officer, or when no officer accompanies the troops, a mess sergeant, should be detailed. He will have general supervision over the preparation of meals and the messing of the troops. In case of any differences between himself and the cooks he should at once report the facts to the Pullman or railroad conductor. At the end of the journey he will divide the unconsumed rations among the organizations of the command.

487. When kitchen car is not furnished field ranges may be set up in a baggage car, but any alterations necessary in the car should be made by the railroad company. Such alterations should be stated in the contract. A portable gas cooker has been devised for use on sleeping cars equipped with gas, this may also be used in day coaches and baggage cars so equipped. This cooker will provide coffee and hot meals for forty-eight men (maximum number carried in one car). Garrison rations should be used.

488. Each troop car should have a sufficient number of kettles or boilers and clean dish towels to enable the men to wash their individual mess kits; but company commanders are responsible for providing these articles and the details for their use.

Remarks

489. All troops having detrained, the Supply Officer, or one of his assistants, accompanied by a representative of the railroad should inspect all cars. Notation should be made of all damage to the cars caused by the men. The cars should be as clean as when turned over to the troops and nothing should be left in the cars except the property belonging to them. A report of this inspection is made by the officer to the commander of the train.

490. The commander of the train should understand that he is in command and that he controls the movements of the train at all times while troops are on board. He should see that the provisions of the contract are carried out, should settle with the representative of the railroad all questions which may arise needing settlement. At the end of the journey he should make a written report to his immediate commanding officer concerning the accommodations furnished by the railroad, the damage to equipment with a statement of the names of those responsible, and any remarks he may care to make concerning the service en route.

CHAPTER XI

CARE OF ARMS AND EQUIPMENT

CARE OF ARMS

Small Arms

491. No language is too strong to vividly impress on the mind of the enlisted man the necessity for properly caring for his fire arms.

492. A rifle is not clean unless it is clean all over, every crack and crevice being free from rust and dirt; however, of all parts that should be scrupulously cared for, the bore is the most important. The bore is manufactured with great care in order that a high degree of accuracy may be obtained and if not kept clean this accuracy is impaired. The residuum from smokeless powder tends to corrode the bore and should therefore be removed as soon after firing as possible.

493. The Ordnance Department furnishes proper cleaning materials and no other kind should be used. If there is no ordnance material available it is better to use some kind of cleaning material that will not injure the rifle than it is to use none at all. Cleaning material should always be taken to camp in sufficient quantities to keep the rifles in proper condition while the organization is in the field.

494. Use of Oil:

The proper use of oil on fire arms is beneficial, the improper use is detrimental. Oil is a rust preventative, and where there is no danger of rust there is no need of oil except a drop or two as a lubricant in the working parts of the breach mechanism. Too much oil collects dust, dirt, and sand. In camp where rifles are exposed to dampness and dew it is imperative that all metal parts be coated with a very thin coating of oil, so little in fact as to be hardly noticeable.

The proper kinds of oil for use on the various parts of the rifle are:—

- (a) Stock:—Raw linseed oil, polishing being done by rubbing with the hand.
- (b) Chamber and bore:—Cosmic oil, cosmoline, or “3 in 1” oil.

- (c) Metal Bearing and Contact Surfaces:—Sperm oil, for lubricating purposes.
- (d) All Metal Parts:—Cosmic oil, cosmoline, or “3 in 1” oil when rifles are stored, or not to be used for an appreciable period.
- (e) Rusted Parts:—Cosmic oil and a soft pine stick.

Note: “3 in 1” oil is not supplied by the Ordnance Department, consequently the use of this oil on fire arms is not recognized as being legitimate, except that the 1913 *Firing Manual* authorizes its use.

The best method of applying any oil is to rub with a piece of cotton cloth upon which a few drops of oil have been placed, thereby avoiding unnecessary waste of oil. Oil can be removed from the bore by means of a rag dampened with gasoline or naphtha.

495. Rust:

Dampness produces rust. It is far easier to prevent rust than it is to remove it.

Rust must not be removed from service rifles by means of emery paper, emery dust, sapolio, or kerosene oil, or so called “rust solvents.” Blued parts and metallic bearing and contact surfaces of the breach mechanism may be freed from rust by means of cosmic oil, a soft pine stick, and plenty of patience and muscular energy.

The bore, when rusted, may be freed from rust by the use of cosmic oil on a rag which is run through the bore. It will take a long time to get it out. Rust pits cannot be removed without grinding down the rusted surface, and of course if this is done, the rifle will be ruined and the soldier will be required to pay for it or the cost will be charged to the state.

496. How to Clean a Rifle:

Bolt: Remove the bolt, take it apart, and wipe each part separately, using sperm oil to soften dirt if necessary; wipe clean; coat with a thin coating of sperm oil; assemble the parts; lay aside out of the dirt. Use “3 in 1” oil if no sperm oil is available.

497. Stock: With a damp cloth, clean the stock of all dirt; dry it by rubbing with a dry cloth; put a little raw linseed oil on the palm of the hand and rub it into the stock, rubbing until dry.

498. Barrel:

(a) If the rifle has not been fired: Remove the bolt; rest the rifle over something so that the muzzle will be inclining downward, being careful not to scratch the stock, or rest the rifle muzzle on a clean board holding it nearly vertical. If the rifle is not very dirty run an oiled cloth through it, using cosmoline or "3 in 1" oil and inserting the cloth from the *breech* end by means of a long *brass* cleaning rod; using clean pieces of cloth, remove the oil and leave the bore clean and dry. If the rifle is very dirty, use a wet piece of cloth first, then a dry piece, then an oiled piece, then a dry piece, leaving the bore clean and dry.

(b) If the rifle has been fired: It should be cleaned as soon after firing as practicable.

(1) *The prescribed method:* The Ordnance Department prescribes this method: "If provided with a cleaning rod, insert in the chamber a cartridge shell, the front end of which has been filled with a wooden plug, and close the bolt; clean the bore with rags saturated with soda water, or if that is not obtainable, with clear water; wipe thoroughly dry with clean rags; remove the bolt and cartridge shell; clean and dry the chamber, from the rear, in the same manner; finally oil both chamber and bore with cosmoline, leaving a light coating. If, however, a cleaning rod is not at hand, the barrel should be cleaned as thoroughly as possible by means of the thong brush and rags, and oiled as above." The rag is run from the breech to the muzzle. The *Firing Manual* prescribes that a rifle *should not be cleaned from the muzzle* but should be cleaned from the breech, and this manual authorizes the use of No. 9 Powder Solvent. This solvent is the best thing to use for dissolving powder fouling.

(2) *Another method:* Remove the bolt; invert the rifle as described in (a); using pieces of rag wet in a solution of water and soda and squeezed out in the hand, insert a piece of rag into the bore from the *breech* end of the rifle, using a long brass cleaning rod and, being very careful that no water runs into mechanism, run the rag up and down the whole length of the bore; repeat as often as necessary; dry and oil as explained in (1).

Or a solution of soda and water may be placed in a basin, the muzzle of the rifle dipped into the solution and retained there while the solution is alternately sucked up into the bore and forced out by means of a rag on the end of a long brass cleaning rod inserted into the bore from the chamber end of the rifle barrel. If this is done extreme care must be taken that the rag is not drawn back too far and water forced into mechanism. The rifle is then dried and oiled as explained in (a).

Note: Do not get soda water or cosmic oil into the breech mechanism.

(3) *If the rifle has become metal fouled:* The Ordnance Department supplies the ingredients for making up a metal fouling solution. Enough of this solution for 20 rifles consists of

2 medium heaping spoonfuls Ammonium persulphate.

1 medium heaping spoonful Ammonium carbonate.

$\frac{3}{8}$ of a pint Ammonia, 28 per cent or 12 spoonfuls.

$\frac{1}{4}$ of a pint Water or 8 spoonfuls.

Note: The spoon used is the spoon issued with the mess kit.

Mix the solution as follows: Pulverize and mix the ammonium persulphate and ammonium carbonate, then add the ammonia and water, stirring thoroughly; let stand for one hour, when it will be ready for use.

The solution having been prepared, plug the bore of the rifle at the breech as explained in (2), or by using a cork; fill the bore with the fouling solution, leave for 30 minutes; remove bore plugs and solution, being careful not to get any or the solution in mechanism as it will cause rust; clean, dry and oil the bore as explained in (a). Great care must be used in using this solution. The solution may be used twice and should be used within 30 days.

499. Other Metal Parts:

Clean and oil all other metal parts with cosmoline. The parts which usually rust and are not noticed are the following:

Butt swivel, plate, pin, screws.

Front sight screw.

Firing pin knob.

Floor plate.

Lower band, spring, swivel, screw.

Rear sight, leaf, movable base, windage knob, screws.

Stacking swivel, screw.

Trigger, trigger guard, screws.

All screw heads should be cleaned with a pointed stick and oil.

500. Bayonet and Scabbard:

Should be cleaned with cosmic oil or cosmoline only. The scabbard and metal parts about the handle need constant watching, they are very liable to become rusty and not be noticed.

501. How to Clean a Pistol:

In general, the method is the same as for the rifle, except that it may be hard to get at the bore from the breech. First clean the outside of the barrel, trigger and trigger guard; remove the magazine; open the chamber and lock it open; clean the bore; with a sharp stick clean all screw heads, crevices, etc.; dry and oil all parts; close the chamber; insert the magazine. Or take it apart, cleaning each part separately.

Rules Concerning the Rifle

502. Keep all cams oiled with sperm oil.

Keep rifles well oiled with cosmoline when stored.

Oil rifles every day when in the field.

Never lay rifles down on the ground; stack them, rest them against something or lay them on clothing or bedding.

Never remove the rear sight base and front sight stud from the barrel.

Never unscrew the barrel from the receiver.

Never remove the stock except by an order from an officer, and this order should only be given to selected and instructed men.

In case of a misfire pause an instant before drawing the bolt back, the cartridge may go off.

Never point a rifle at another man, remember that it is always the gun that is "*unloaded*" or that is "*locked*" that kills and wounds.

Clean rifles from the breech end, never from the muzzle.

Data Concerning the Rifle

503. Ball cartridges are packed in bandoleers, 60 to a bandoleer.

A box of rifle cartridges contains 20 bandoleers, or 1,200 cartridges; it weighs 112 pounds; dimensions are 34.5 x 9.5 x 8.27 inches.

504. Color bands around ammunition boxes are as follows:

Ball cartridges	Red.
Blank cartridges	Blue.
Dummy cartridges	Green.
Gallery cartridges	Brown.
Guard cartridges	Orange.

505. The muzzle velocity of the rifle is 2,700 feet per second; this is measured over a distance of 50 feet.

Length complete is 43.412 inches.

Weight of the rifle is 8.69 pounds.

Weight of the bayonet is 1 pound.

The point blank danger space of the rifle is, when firing standing, 407 yards; when firing kneeling, 324.6 yards; and when firing sitting, 227 yards.

Field Guns

506. After firing, the bore of the gun should be cleaned to remove the residuum of smokeless powder; it is then oiled. In cleaning, wash the bore with a solution made by dissolving $\frac{1}{2}$ pound of sal soda in one gallon of boiling water.

After washing with the soda solution wipe perfectly dry, then oil the bore with a thin coating of light slushing oil provided by the Ordnance Department for this purpose, using a slush brush.

The breech mechanism should be kept clean and well oiled. It should be dismantled from time to time for examination, and oiled when necessary. In the 1902 gun, the firing pin should always be uncocked when the gun is not in use, as this relieves the strain on the firing pin spring.

The spare parts carried in the trail box on the battery wagon should be well coated with heavy cosmic oil and each piece then wrapped in paper to prevent the oil from rubbing off.

General orders from the War Department give instructions relative to making repairs to Field Batteries and furnishing ordnance stores and supplies for batteries. General Orders from the War Department also give instructions relative to making repairs and for the care of delicate instruments such as sights, telescopes, etc.

CARE OF EQUIPMENTS

Haversacks, Webb Belts, etc.

507. Haversacks, canteen covers, webb belts, etc., may usually be cleaned of mud and dust by means of a very stiff nail brush or scrubbing brush being used to brush out the dirt and dust; no water is used for this purpose.

When it is necessary to wash these articles, use H. & H. soap, cold water, and a stiff nail or scrubbing brush. Soap and water usually bleaches these articles of equipment.

Grease stains may be removed by placing a piece of blotting paper over the spot and placing a hot iron on the blotter.

In case the old khaki colored equipment is issued this may be cleaned as above and khaki blanco used to bring the articles back to the original color. Khaki blanco may usually be purchased at any drug store.

Brass Trimmings

508. All brass trimmings may be polished with Putz Pomade, Whiting, or Bar Keepers' Friend. The last is the best metal polish known to the authors.

Bronze trimmings must not be polished.

Leather Equipments

509. If leather is not properly cared for it soon becomes hard and will crack and break. Leather should never be washed with water but should be cleaned with a soapy lather. It should never be dried in the sun, but in the shade. Too much oil on leather darkens it. Paragraph 293 Army Regulations forbids the use of any dressing or polishing material on leather accouterments or equipments of the soldier, the horse equipments of cavalry, or the artillery harness, except the preparations supplied by the Ordinance Department for that purpose.

510. To Clean:

Equipments should be cleaned by means of a sponge and a lather of castile soap and warm water, using a comparatively dry lather rather than a wet one. Dry leather in the shade, and when nearly dry, lather again with Crown soap and warm water,

hand-rubbing until dry. If the leather is very hard and brittle a little neat's-foot oil should be rubbed into it after it has been washed with the lather of castile soap and while it is still damp; then, when dry, relather it with Crown soap and warm water and hand rub dry. Frank Miller's harness dressing may be used instead of castile soap.

511. To Polish:

If a polish is desired first clean and dry the leather, then apply a thin coat of the russet leather dressing issued by the Ordnance Department.

Harness

512. Russet:

The care of russet leather harness does not differ from the care of russet leather equipments given in the foregoing paragraphs.

513. Black:

Using a wet lather of castile soap and warm water, thoroughly clean the harness. Wipe with a dry rag. Now sponge with a thick lather of harness soap and warm water until the leather is perfectly clean. Wipe off the dirty lather and recoat the harness with a very thick lather of harness soap and warm water and allow it to dry on the leather without further rubbing. After the lather has been absorbed and the leather is dry put on a light coat of harness dressing by using a perfectly dry sponge, touching the harness lightly, just enough to spread the dressing. Keep the harness dressing in an air-tight package when not in use.

When harness is hard and has not been cleaned for a long time first clean as above, mix teaspoonful of lampblack in 1 pint of lukewarm neat's-foot oil, stirring the mixture until it has a glassy appearance. Apply the mixture with a sponge, rub it in well, lay harness aside for 48 hours if possible, then apply harness dressing as above described.

CHAPTER XII

CARE OF ANIMALS

(Taken largely from an excellent paper on the subject by a student of the Service Schools, Fort Leavenworth, 1912.)

General Remarks

514. Abuse of Animals:

While many men do not actually abuse their animals by maltreatment they do so by thoughtlessness, lack of knowledge, and personal selfishness and laziness. Organization commanders and Supply Officers must be constantly on the watch to see that animals are properly fed, watered, groomed, salted, sheltered, and shod; that sick animals are attended to; that saddles, bridles, and harness are properly fitted.

Mules give an indication that they are very tired when they fail to flop their ears while pulling a load. It may be relied upon that a team of mules pulling a load and constantly flopping their ears is in good condition.

Notice the remarks under "Sore Backs" in this chapter.

515. Picket Line:

A picket line should be established in all cases when practicable and should be as long as possible. A ground rope is *not* recommended unless the animals are familiar with it; if not familiar, rope burns and loss of shoes will result. A high rope should be used. This rope should be 4 feet off the ground at sag. Animals should be tied to a high rope with sufficient halter strap length to enable them to feed and lie down with ease.

The ground for the picket line should be selected with care. It should not become soggy and excessively muddy in event of rain. If it contains underbrush this must be cleared off, not merely by chopping off the brush and leaving the stumps but by chopping out the stumps some inches below the surface of the ground, in order that the animals may lie down with comfort. Rocky ground should not be selected if possible to avoid it. All stones, weeds, rubbish, etc., must be raked off a picket line and the ground left smooth and bare. The ground should be

raised and ditched for drainage. No animal should ever be tied to a picket line until the saddle and bridle have been removed.

516. Grooming:

Animals should be groomed twice each day in camp and at least once each day on the march after the completion of the march.

The animal is usually groomed first on the near side then on the off side with a currycomb applied gently to loosen the scurf and matted hair. This is then repeated with a horse brush, rubbing in the direction of the hair, the brush being cleaned by means of the currycomb after every few strokes. After the animal has been brushed it is rubbed and dusted off with a grooming cloth—eyes, ears, nostrils and dock being wiped with the cloth. A currycomb is never used on the mane and tail, the brush and fingers being used. In camp, grooming should be done at morning and evening stables, while the animals are feeding.

While an animal is being groomed it should be examined for cuts, bruises, saddle harness, and cincha sores, etc. If any man suspects his animal of being sick he should call the attention of the First Sergeant to it. Grooming, as well as feeding, should always be under the supervision of an officer. Immediately after grooming at the end of a march each animal is then hand rubbed for at least thirty minutes, ten minutes being spent on the legs. If it is feeding time feed grain while grooming. After grain is eaten feed hay.

517. Feeding:

The daily allowance of forage is,

Horse, 12 pounds of grain and 14 pounds of hay.

Horse, field artillery, 1300 lbs. or over, 14 pounds of grain and 17 pounds of hay.

Mule, 9 pounds of grain and 14 pounds of hay.

The allowance of bedding is $3\frac{1}{3}$ pounds of straw (or hay) per day. Substitutions allowed in the field on computed value of forage ration.

The allowance of salt per animal is $\frac{3}{4}$ ounces of salt; this may be increased by the commanding officer when necessary to $\frac{6}{15}$ ounce.

The allowance of vinegar for cleaning feed boxes is $\frac{1}{10}$ gill.

It is not necessary to feed all animals the full allowance of

grain. Each animal should be watched while eating and should be fed accordingly. The full allowance of hay should always be fed; if it is of good quality it will always be eaten. Never feed an animal grain when the animal is tired, hot, or excited. Supply Officers should see that feed boxes are clean and free from stale grain. Feed boxes should be washed once a week with vinegar furnished for the purpose.

A small handful of salt should be mixed with the grain in each feed box or nose bag every Saturday morning, it may be fed twice a week by using half of this amount. If an animal continually fails to eat all of his grain cut down the allowance, unless he shows signs of losing flesh; in that case watch him carefully and examine his mouth for lampas and if he be found to be suffering from this soak his grain in warm water until soft. When changing grain as from oats to barley or corn cut down this portion of the forage allowance, returning gradually to full feed in about 5 days. Feed more hay during this period.

Three feedings a day should be the rule when practicable, usually at 5:30 A. M., 11:30 A. M., and 4:30 P. M. Never feed less than twice a day, morning and evening, except for pack animals. On the march always feed so as to allow 1½ hours before marching; in camp, when practicable, allow 2 hours.

Methods of feeding differ. Usually the stable guard feeds hay and the men of the organization feed grain; the stable guard may feed both in the morning, the men feeding grain in the evening and the stable guard feeding hay in the evening when "stables" have been completed. Grain should always be fed before feeding hay. A mule will eat musty grain and hay but a horse will not; be careful not to feed musty forage to either.

Note: A heaping cupful of oats equals 1 lb. of oats. Pressed hay weighs about 11 pounds per cubic foot.

518. Watering:

In camp: Ordinarily twice a day, 2 hours after morning stables and about 4 P. M. In hot weather 3 times a day, once during the middle of the day.

On the march: Whenever a good opportunity presents itself and the animal shows an inclination to drink.

At the conclusion of the march do not water until the animal has been unsaddled, rubbed dry, and has rested half an hour. This is especially necessary if he is much fagged or if the weather is hot.

Animals should be watered from a trough when one is available. A portable canvas trough is easy to make and to transport in the field and is recommended for all mounted organizations. Animals must be watered quietly and without confusion or haste. Do not let an animal drink much water when overheated. A moderate amount of water will not hurt an animal, no matter how warm he may be, provided the journey is to be *immediately* continued. Never make a dry camp, always march to water.

519. Salt:

All animals need salt. The allowance of 2 ounces per week per animal is sufficient to allow a handful to each animal every ten days; however it is believed to be better to set a certain day each week on which salt is to be fed. It is better to feed twice a week, dividing the allowance; it should be put in the feed box or nose bag. Some organization commanders feed salt daily.

520. Vinegar:

The allowance of 1/10 of a gill of vinegar per day per animal permits the feed boxes to be sponged out with vinegar once a week. This should be done.

521. Bitting:

There are 2 kinds of bits supplied by the Government—the snaffle and the standard Army curb. A combination of the two, or the “bit and bridoon” is the ideal mouth gear, but their combination involves the use of four reins instead of two, and it requires a considerable amount of training to produce desirable results.

Only to those commanders who have time and opportunity to thoroughly instruct both men and horses is this form of bitting recommended. Curb bits should not be issued to green men, nor should they be used on young horses or those that are not used to such bits; the horses should first be made leg and rein wise and the men should be thoroughly familiar with all of the aids and should acquire a light hand before the curb bits are employed.

Bits should be carefully fitted to the horse's mouth and care should be taken that a bridle fitted for one horse is not carelessly used on another without readjusting. Let morning inspection include "bit adjustment". Unless careful attention is given to this subject it will be found that in short time very few bridles in the command are properly fitted and adjusted. This is a result of many causes, as the stretching of headstalls, exchanging of equipment, "opinions" of the men, etc. It therefore requires the constant personal attention of organization commanders to prevent this evil, which results in a lot of unruly horses if not corrected.

The width of the bit should be sufficient to allow the mouth to be enclosed between the cheek pieces without cramping the lips, and no wider. By means of the adjustable cheek straps the bit should be raised to the corners of the mouth without pressure, but in all cases high enough to prevent contact with the tusks.

The curb chain should lie smoothly in the chin groove and should be of such length as to freely admit of the insertion of three fingers between the curb and the jaw. It should not be so loose as to allow the bit to "fall through".

522. Saddling:

The manner of putting a saddle on a horse's back, though simple, is important.

An ideal saddle is one that can be placed in such a position that when the rider is in it the maximum weight will be over the center of motion, which is near the fifteenth vertebra. However, this is not always possible and the saddle must be placed with reference to a proper relation between the front end of the side bars and the point of the shoulder blade when in motion. i. e., the shoulder blade should not work backwards against the end of the side bars. Roughly, the width of three fingers should be allowed between the end of the side bar and the shoulder.

In saddling it should be remembered that the cinch passes directly around that part of the chest containing the lungs and if drawn too tight is painful, injurious, and materially reduces the endurance of the animal. When being saddled some horses will swell themselves up or distend their lungs so that when the operation of saddling is over they can relax and thus loosen

the cinch. Self-preservation has taught them this, but the inexperienced horseman ascribes it to a vexatious vice, and cinches tighter each day. This disposition on the part of the men should be strenuously corrected.

The Cavalry Drill Regulations prescribe that troops be halted after the first ten minutes march to allow the men to relieve themselves and to adjust saddles.

It is important in saddling to *keep* the blankets smooth and *in place*. Simply because a horse is properly saddled in the beginning is no reason for expecting the saddle to remain in place. In putting on the blanket, it should be placed forward of its proper position and slid backwards until in place. This will smooth out the hair and tend to prevent chafing. Blankets should be kept clean, soft, and as dry as possible. If they are allowed to become caked with perspiration, hair, and grit, as is often seen, sore backs are sure to follow. After thoroughly drying the blanket it should be rubbed thoroughly and vigorously between the knuckles, brushed well with a horse brush and beaten well with pliable weeds or switches. On removing the blanket from the horse it should be folded with the wet side out and kept out of the dust.

Should sore backs develop in spite of efforts the blanket must be folded so as to take the pressure from the affected parts; it is preferable to lay the horse off. Rule: Keep blankets clean, smooth, and dry. Keep saddles and blankets in proper positions by frequent adjustment. Cinch snugly but not too tightly.

523. Marches:

See Chapter VIII, Practice Marches.

SPECIAL REMARKS

Saddle Animals

524. Horses:

Height, weight, age:

The height of the service saddle horse should be between 15 and 15¾ hands.

The weight should be between 950 and 1,100 pounds.

The age when purchased should be between 5 and 8 years, but it is not an essential feature providing the horse is sound. Very young horses and those of considerable age will break down under hard field service.

Characteristics:

Horses have less intelligence than mules.

They are not as liable to drown as mules.

They will not eat musty forage nor dirty forage.

If they are caught in the picket line they will kick and plunge and are liable to break their legs.

If they are mired in the mud or quick sand they will struggle and plunge out.

525. Mules:

Same as for Pack Mules.

Draft Animals**526. Horses:**

Same general data as given for saddle horses except that height should be between $15\frac{1}{2}$ and 16 hands. Weight should be between 1,150 and 1,400 pounds.

They will wear themselves out on loads that mules will buckle down into the harness to and pull steadily without tiring themselves.

527. Mules:

Height, weight, age:

Height, wheel, $15\frac{3}{4}$ to $16\frac{1}{4}$ hands.

lead, $15\frac{1}{4}$ to $15\frac{3}{4}$ hands.

Weight, wheel, 1,150 to 1,250 pounds.

lead, 1,050 to 1,150 pounds.

Age, 3 to 7 years when purchased.

Characteristics:

Have more intelligence than a horse.

Are liable to drown if they get their heads under water.

Will eat musty forage.

If caught in the harness or a rope will ordinarily stand still and not injure themselves.

If mired in the mud or quicksand will give up at once.

Will settle into the harness and pull a heavy load.

Pack Mules**528. Height, weight, age:**

The height of a pack mule should be between 14.1 and 15 hands.

The weight should be between 950 and 1,025 pounds.

The age should be between 4 and 6 years when admitted to the pack train.

529. Characteristics:

Same general characteristics as given for a draft mule.

When pack and rigging are removed they enjoy a roll. This is good for them and should be allowed; they may be groomed after this.

Under ordinary conditions a pack mule will carry a load of 250 pounds; will travel from 20 to 25 miles per day at a rate of from $4\frac{1}{2}$ to 5 miles per hour. If in the pack train they should not be led. It can do the above without grain or hay if good grazing is available. For a forced march the loads should be reduced to 200 pounds. In mountainous country a mule with a 250 pound load can make about 15 miles per day.

Some mules will be found able to carry more than others; they should be watched carefully and the loads distributed accordingly.

530. Pack saddles and rigging:

Pack saddles must be adjusted to the mule very carefully in order that he will not get a sore back; this is most important, for when he has a sore back he is not able to carry a load and his usefulness is gone.

Care must be exercised in putting the saddle on the mule to see that the blanket is smooth, and it must be clean. The load must be adjusted so that it is equally divided between the two sides; this can be done by lifting up the packs and judging the weight.

Common Diseases and Treatment

531. The normal pulse of a healthy horse is from 34 to 38. The normal temperature is 99 F.

Animals should not be given too much medicine, as it is detrimental.

532. Cold:

Symptoms: Snorting cough, loss of appetite, dull eye, rough coat, discharge from nostrils.

Treatment: Give plenty of water, feed hay and bran mashes; steam the head by holding it over a bucket of hot water containing a couple of ounces of creolin or carbolic acid, stir gently with a wisp of hay; if feverish, give 1 or 2 drams of nitrate of potassa daily for 3 days; if constipated use injection of warm soapy water. For sore throat give 1 gram nitrate or chlorate of potassium in drinking water 3 times a day; apply liniment of 2 parts linseed oil 1 part turpentine 1 part solution of ammonia, well shaken, to the outside of the throat and rub it in.

533. Lung Fever:

Symptoms: Fits of shivering; cold extremities and ears; uneasy and fretful; pulse about 80; temperature 103 F. to 106 F.; stands with fore legs well apart; never lies down, or if they do they get right up again.

Treatment: Call a veterinarian. Entire rest; laxative food; blankets; flannel bandages; fresh air but out of draughts; apply blankets wrung out in hot water to both sides of the chest and cover with dry cloths, then dry well and rub well with liniment of linseed oil and ammonia.

534. Spasmodic Colic:

Symptoms: Intermittent pain in intestines, as indicated by animal looking anxiously at flanks. As pain increases animal kicks his belly; lies down and gets up frequently; hard, angular dung pellets may be passed. Extremities and coat normal.

Treatment: Drench of 1 pint raw linseed oil, 1 dram cannabis indica, and 1 dram of nitrous ether. If a light case give 1 ounce sulphuric ether, 1 ounce tincture of opium, and 1 dram powdered ginger in cold water. An injection of warm soapy water may help. Passage of urine is a favorable sign. If not relieved repeat drench at intervals of 1 hour.

535. Flatulent Colic:

Symptoms: Belly distended and resonant on percussion; pain seems to be constant; perhaps delirium; unsteadiness on feet; cold extremities.

Treatment: Call a veterinarian. Drench of 2 ounces bicarbonate of soda, 2 ounces sulphuric ether, 2 ounces tincture of opium dissolved in cold water. If not relieved, repeat the drench at intervals of 1 hour.

536. Constipation:

Symptoms: Coat rough; extremities swollen; belly distended; loss of appetite; animal strains in passing fæces, which is usually small, dry, and hard; usually no sign of pain.

Treatment: Laxative food; injection of tepid water and sweet oil twice a day for a few days. In prolonged cases, give a good purgative.

537. Diarrhoea:

Symptoms: Watery fæces.

Treatment: Give drench of $\frac{1}{2}$ pint raw linseed oil; also an infusion of gentian, 1 ounce, and 2 ounces of opium. Feed dry food.

Other remedies: Tannic acid, prepared chalk, powdered opium.

538. Chronic Indigestion:

Symptoms: Loss of appetite; constipation alternating with looseness of bowels; passage of whole grain, impacted masses of hay, and much wind. Loss of flesh, skin dry and tight; frequent yawning and turning outward the upper lip; colicky pains sometimes.

Treatment: Examine teeth and correct any undue sharpness or irregularity, or remove decayed ones. Give good food with regularity. If horse bolts his food spread it out and make him eat slowly. Regular exercise.

539. Glanders:

Symptoms: Bleeding from the nose; chronic cough; swelling of hind legs, which are hot and painful to the touch. Rarely any fever; if present, suspect acute glanders and beware of contagion.

Treatment: Isolate the animal and call a veterinarian for benefit of his diagnosis. There is no cure, the horse must be shot to prevent contagion.

540. Lampas:

Symptoms: A trifling ailment. Inflamed and swollen ridges of the mouth; sore palate, which prevents eating for a few days. Feverish symptoms.

Treatment: Feed wet bran and other soft food. Do not burn palate with a hot iron as is sometimes done.

541. Sunstroke:

Symptoms: Animal suddenly stops, drops his head, begins to stagger, breathes with a loud noise; sweats; pulse slow; temperature high.

Treatment: Call a veterinarian. Applications of ice or ice water on the head; cold spray over the body with a hose; cold injection into rectum; placed in the shade and kept cool and quiet. Stimulants may be necessary.

542. Heat Stroke:

Symptoms: Requires urging for some time previous to appearance of any other symptom; does not perspire when he should; hurried breathing; watery and bloodshot eyes; nostrils

distended and very red, gradually becoming purple; pulse rapid but weak.

Treatment: Same as for sunstroke.

543. Thumps:

Symptoms: Severe shocks, accompanied by dull thumping sound, may be heard in left side and flank. Quick, jerky expiration.

Cause—over exertion.

Treatment: Absolute quiet; drench of 2 ounces aromatic spirits of ammonia in a pint of water; or 2 ounces sweet spirits of niter and 2 drams fluid extract belladonna in 1 pint of water. If necessary repeat either dose in 1 hour.

544. Lameness:

Suspect a picked up nail or stone or a punctured frog.

Treatment: Remove the shoe. If this is done and does not remedy the lameness, call a veterinarian.

545. Sore Backs:

Treatment: Fold or cut the saddle blanket so that no pressure is brought to bear on the sore. For pack animals alter the stuffing of the aparejo. Apply salt and water if there is only swelling; if irritation is not removed and there is evidence of suppuration apply poultices of linseed meal mixed with boiling water and sweet oil stirred in afterwards. If lancing becomes necessary call a veterinarian.

In warm weather the woolen blanket produces much heat and care should be taken to cool the horse off before exposing the back. This will tend to reduce swelling arising from ill fitting saddles.

If the skin has been rubbed off and a raw spot formed it should be treated with cosmoline or carbolized oil. The "white lotion" composed of 1 ounce sulphate of zinc, 1 ounce acetate of lead, 1 quart of water is a valuable dressing for sore backs. Massage treatment is beneficial.

546. Cuts and Lacerations:

Treatment: Gently clean with a soft sponge and castile or carbolic soap and hot water, then apply an antiseptic wash. Bandage so as to keep the dirt and flies out of the wound and then leave it alone. If the cut is sufficiently severe to require stitches call a veterinarian.

CHAPTER XIII

PAY OF TROOPS

547. One of the most important things pertaining to field service is the payment of troops. In order that payment may be made without delay the Pay Rolls must be made out properly.

548. The War Department publishes the regulations governing the qualifications necessary for enlisted men to receive pay in orders, bulletins, and circulars. These regulations must be complied with before payment will be made on the rolls.

Precautions Before Coming to Camp

549. Bring with you to camp all orders affecting your organization in any way, and any and all letters authorizing anything affecting your organization or any member of it. Bring too much rather than not enough. Bring all data (service records or enlistment blanks) showing the dates of enlistment of members of your organization and such information as you have regarding the dates of appointment of officers, and non-commissioned officers. Bring a list of your entire organization whether they all attend the camp or not.

550. Bring your pay rolls if same are furnished you before leaving for camp. Make out one copy en route, if possible; if not completed before arrival at camp this roll should be completed immediately after arrival and held until ordered turned in. Do not make out other rolls until the one turned in has been returned to you and you have been notified that it is correct.

Information Pertaining to Pay Rolls

551. Signatures on pay rolls in receipt of pay must be genuine signatures, no man is permitted to sign for another, nor may an officer sign the name of one of his men who may be absent from the pay table.

552. If officers or men were ordered to camp in advance of the period of the encampment or held there subsequent thereto the authority in each instance must accompany the roll. In general, any special authority that may be issued to an organization that may in any way affect the pay of any member thereof

must accompany the roll; it is not sufficient to merely make a notation of the roll of the authority in question.

553. Fines imposed by Summary Court for the dereliction of duty should be entered on the pay rolls.

554. Everything which in any way affects the pay of any officer or enlisted man must be noted on the pay roll opposite that person's name in the "Remark" column. As many lines as may be necessary to avoid crowding will be taken after each name, and only one line of written or typewritten matter will be placed on one ruled line.

555. There is no reason why organization commanders should not be able to submit correct rolls to the officer making the payment providing the instructions contained herein are carefully followed. Before making out the roll the instructions herein should be carefully read and understood, then proceed with the preparation of the roll and follow these instructions.

556. In general in every instance where any member of the organization claims pay in excess of the base pay of his grade for the actual number of days authorized for the encampment, or when such member has been at the encampment longer than the time authorized by the War Department, or in cases where it is probable his right to pay may be questioned by the officer making payment, a notation must be made in column 4 referring to some competent authority for such payment and a copy of this authority should be submitted when the roll is submitted; it will undoubtedly be called for and payment will undoubtedly be refused if the organization commander cannot show such authority.

557. The names of all officers and enlisted men belonging to the organization will be entered on the pay rolls whether they are present or absent.

558. Pay rolls will be made out in triplicate. Two of the three copies (one being the signed roll) will be furnished the disbursing officer and the third properly filled in will be retained by the organization.

559. Organizations are paid on War Department Forms No. 367-367a or 366-366a. A pay roll is made up of one form 367 or 366 and as many forms 367a or 366a as may be necessary, fastened together along the indicated edge by sewing or by

means of a stapling machine or other permanent fastening, but not by means of glue or mucilage.

Pay Roll Abbreviations

560. Officers should familiarize themselves with the following authorized abbreviations which will be used in the preparation of pay rolls and under no circumstances will any others be used.

BRANCHES OF THE SERVICE

Cavalry—Cav.
Coast Artillery—CA.
Dental Corps—DC.
Engineers—Engrs.
Field Artillery—FA.
Hospital Corps—HC.
Infantry—Inf.
Medical Corps—MC.
Medical Reserve Corps—MRC.
Ordnance Department—Ord Dept.
Quartermaster Corps—QMC.
Signal Corps—Sig Cps.

DEPARTMENTS, ETC.

Eastern Department—E Dept.
Central Department—C Dept.
Hawaiian Department—H Dept.
Southern Department—S Dept.
Western Department—West Dept.
War Department—WD.
Coast Defenses—C Def.
District—Dist.
Divisions—Div.

GRADES, ETC.

Company

Artificer—Art.
Chief Mechanic—Ch Mec.
Cook—Ck.
Corporal—Corp.
Farrier—Far.
First Sergeant—1st Sgt.
Horseshoer—Hs.
Mechanic—Mec.
Mess Sergeant—Mess Sgt.
Musician—Mus.
Private—Pvt.
Quartermaster Sergeant—QM Sgt.
Sergeant—Sgt.
Sergeant Major—Sgt Maj.
Stable Sergeant—Stab Sgt.
Trumpeter—Trum.
Wagoner—Wag.

MONTHS

January—Jan.
February—Feb.
March—Mch.
April—Apr.
August—Aug.
September—Sep.
October—Oct.
November—Nov.
December—Dec.

ORDERS

Battery Orders—O.
Company Orders—O.
Current Series—cs.
Field Orders—FO.
General Orders—GO.
General Orders, Coast Defenses—GO C Def.
Regimental Orders—RO.
Special Orders—SO.
Special Orders, Coast Defenses—SO C Def.
Troop Orders—O.
Verbal Orders, Battery Commander—VOBC.
Verbal Orders, Company Commander—VOCC.
Verbal Orders, Regimental Commander—VORC.
Verbal Orders, Troop Commander—VOTC.

ORGANIZATIONS

Battalion—Bn.
Battalion (Squadron) Non-commissioned Staff—Bn (Sq) NCS.
Battery—Btry.
Company—Co.
Machine Gun Company—MGCo.
Non-commissioned Staff—NCS.
Non-commissioned Staff, Coast Artillery—NCSCA.
Regiment—Regt.

Regimental Non-commissioned
Staff—RNCS.
Squadron—Sq.
Troop—Tr.

BATTALION, SQUADRON, AND REGIMENTAL

Battalion (Squadron) Quartermaster Sergeant—Bn (Sq) Qm Sgt.
Battalion (Squadron) Sergeant Major—Bn (Sq) Sgt Maj.
Chief Musician—Ch Mus.
Chief Trumpeter—Ch Trum.
Color Sergeant—Col Sgt.
Drum Major—Dm Maj.
Principal Musician—Prin Mus.
Regimental Commissary Sergeant—Regt Com Sgt.
Regimental Quartermaster Sergeant—Regt Com Sgt.
Regimental Sergeant Major—Regt Sgt Maj.

MISCELLANEOUS

Casemate Electrician—Cm Elec.
Chief Loader—Ch Load.
Chief Planter—Ch Plan.
Engineer—Engr.
First-class Electrician Sergeant—1cl Elec Sgt.
Fireman—Fm.
First-class Gunner—1cl Gnn.
First-class Sergeant—1cl Sgt.
Gun Commander—Gn Comdr.
Gun Pointer—Gn Ptr.
Junior Sergeant Major—Jr Sgt Maj.
Master Electrician—Mr Elec.
Master Gunner—Mr Gun.
Master Signal Electrician—Mr Sig Elec.
Observer, first class—Obs 1cl.
Observer, second class—Obs 2cl.
Plotter—Plot.
Second-class Electrician Sergeant—2cl Elec Sgt.
Second-class Gunner—2cl Gun.
Senior Sergeant Major—Sr Sgt Maj.
Sergeant, first class—Sgt 1cl.

STATES

Alabama—Ala.
Arizona—Ariz.
Arkansas—Ark.
California—Cal.

Colorado—Colo.
Connecticut—Conn.
Delaware—Del.
District of Columbia—D. C.
Florida—Fla.
Georgia—Ga.
Illinois—Ill.
Indiana—Ind.
Kansas—Kans.
Kentucky—Ky.
Louisiana—La.
Maine—Me.
Maryland—Md.
Massachusetts—Mass.
Michigan—Mich.
Minnesota—Minn.
Mississippi—Miss.
Missouri—Mo.
Montana—Mont.
Nebraska, Nebr.
Nevada—Nev.
New Hampshire—N. H.
New Jersey—N. J.
New Mexico—N. Mex.
New York—N. Y.
North Carolina—N. C.
North Dakota—N. Dak.
Oklahoma—Okla.
Oregon—Oreg.
Pennsylvania—Pa.
Rhode Island—R. I.
South Carolina—S. C.
South Dakota—S. Dak.
Tennessee—Tenn.
Texas—Tex.
Vermont—Vt.
Virginia—Va.
Washington—Wash.
West Virginia—W. Va.
Wisconsin—Wis.
Wyoming—Wyo.
(Hawaii, Idaho, Iowa, Ohio and Utah should not be abbreviated.)

TITLES, DESIGNATIONS, AND OFFICERS

Adjutant General—AG.
Adjutant General's Office—AGO.
Captain—Capt.
Colonel—Col.
Lieutenant—Lt.
Lientenant Colonel—Lt Col.
Major—Maj.
Quartermaster—QM.

Quartermaster General—QMG.
 Quartermaster General's Office—
 QMGO.
 The Adjutant General, U. S. Army—
 AGA.

MISCELLANEOUS

Absent without leave—Awol.
 Appointed—Aptd.
 Appointment—Apmt.
 Article of War—AW.
 Artillery District—ADist.
 Assistant—Asst.
 Cent(s)—¢.
 Civil authorities, in hands of—In
 hands CAuth.
 Classification—Class.
 Clothing—Clo.
 Commanding—Comdg.
 Continued—Contd.
 Descriptive List—DL.
 Department—Dept.
 Detached Service—DS.
 Detachment—Det.
 Discharge } —Disch.
 Discharged }
 Discontinued—Discontd.
 Enlistment—Enl.
 Extra Duty—ED.
 Expiration of term of service—ETS.
 Fort—Ft.
 From—fr.
 Headquarters—Hq.

Hospital—Hosp.
 Inclusive—Inc.
 Indorsement—Ind.
 Line of duty—LD.
 Month(s)—mo(s).
 Ordnance—Ord.
 Organized Militia—OM.
 Paid—Pd.
 Paragraph—Par.
 Qualification—Qual.
 Quarters—Qrs.
 Reappointed—Reaptd.
 Deduced—Rd.
 Received—Recd.
 Reënlistment—Reënlt.
 Regimental—Regtl.
 Relieved—Reld.
 Same date—sd.
 Sentence of summary court—Sent
 SC.
 Sentenced—Sentd.
 Soldier—Sol.
 Special Duty—SD.
 Subsistence—Sub.
 Surgeon's certificate of disability—
 SCD.
 Switchboard operator—Sbo.
 Transportation—Trans.
 United States—US.
 United States Army—USA.
 Voucher—Vou.
 Warrant—Wrnt.

Model Pay Roll Entries

561.

Absence:

(a) In hands of civil authorities:

“In hands CAuth. fr. July 2 to 4/16 Inc. Convicted.”
 (or acquitted, released on bail, released without trial.)

(b) Without leave:

“Awol July 4 to 6/15.

(c) With leave:

“Awl since July 4/15.”

Appointments:

(a) “Aptd. Sgt. fr. Corp., RO. 21, Apr. 2/15.”

(b) “Aptd. 1st. Sgt. fr. Sgt., O. 8, Apr. 2/15.”

(c) “Aptd. Mess Sgt., O. 8, Apr. 2/15.” Assumed
 duties July 2/15.”

- (d) "Aptd. Ck. fr. Pvt., *O*, 9, Apr. 20/15."
- (e) "Aptd. Corp. fr. Pvt. *RO*. 21, Apr. 2/15."
- (f) "Aptd. Corp. fr. Pvt., *O*. 8, Apr. 2/15, Co. being absent fr. Regtl. Hq."

Discharge and Reënlistment:

- "Disch. Aug. 1/15. Wrnt. as Sgt. Contd. on *Reën*l."
- "Disch. July 4/15. Wrnt. as Sgt. and *Apmt.* as 1st Sgt. *Contd.*"
- "Disch. Aug. 2/15. Wrnt. as Sgt. *Contd. Reappointed. Mess Sgt.*
- "Disch. July 5/15. *Ampt.* as Ck. *Contd.*

Death:

- "Died Aug. 2/15."

Desertion:

- "Deserted at Camp, Anniston, Ala., Aug. 6/15."

Discharge:

- Honorable—"Honorably *Disch.* Aug. 3/15 per *ETS.*"
- Dishonorable—"Dishonorably *Disch.* at Camp, Anniston, Ala. Aug. 4/15 per (give authority)."
- For disability—"Disch. Aug. 10/15 on *SCD.* (Quote further authority)."

Forfeiture:

- Loss of Ordnance Supplies—"Due U. S. Ord. 35c."
- Loss of Q. M. Supplies—"Due U. S. Clo. \$1.50."
- Loss of Q. M. Supplies—"Due U. S. C. & G. E. 50c."
- Loss of Q. M. Supplies—"Due U. S. R. S. 20c."
- Sentence by Summary Court—"Stop \$3.00 *Sent SC.* Aug. 1/15." (date when approved by C. O.)

Reductions:

- "Rd. fr. 1st. Sgt. to Sgt. *O*. 6, Aug. 5/15."
- "Rd. fr. Sgt. to Pvt., *RO*. 10, Aug. 4/15."
- "Rd. fr. Ck. to Pvt., *O* 6, Aug. 5/15."
- "Rd. fr. Corp. to Pvt., *Sent SC.*, Aug. 7/15."
- "*Reld.* as *Mess Sgt.*, July 30/15, *VOCC.*"

Transfer:

- "Transferred to Co. A, 2 Inf. N. J. N. G., Aug. 3/15. (quote authority.)"
- "Transferred as Sgt. fr. Sgt., Co. B, this Regt., *RO*. 7, July 3/15."
- "Transferred as Pvt. fr. Sgt., Co. K, this Regt., *RO*. 9, July 5/15."

PREPARATION OF PAY ROLLS

562. *Regular Army Paymasters will not pay on rolls incorrectly made out, nor have they time to teach organization commanders how to make out their rolls.*

563. *The Brief (Front of roll, Form 367).*

Leave the part of the roll above the words "PAY ROLL" blank. Under the words "PAY ROLL of" on the 1st line write the name of the organization and regiment, as:

"Co. G, 1st Inf., Pa. N. G."

"Tr. A, Cavalry, Nebr. N. G."

"Co. B, Engineers, N. Y. N. G."

On line 2 enter the station or place at which the encampment is held, as:

"Mt. Gretna, Pa."

On line 3 enter the dates for which paid, as:

"July 10 to July 20, 1916."

On line 4 enter in the first space whether "General" or "Special" orders and in the second the number of the orders directing the organization to participate in the encampment, as:

"Pursuant to General Orders No. 10-12."

564. *Body of the Roll:*

(1) Top of page 2.

(a) After the words "Pay roll of" enter the name of the organization and regiment or corps, as:

"Co. G, 1st Inf., Pa. N. G."

"Tr. A, Cavalry, Nebr. N. G."

"Co. B, Engineers, N. Y. N. G."

(b) After the word "from" enter the date the organization left home station, as:

"July 10, 1916."

(c) After the word "to" enter the date the organization will reach home station upon return, as;

"July 20, 1916."

(2) Top of page 3.

After the words "received of" leave the blank space vacant unless you know the name and rank of the officer who makes the payment, in which case enter his name, as: "Major F. P. Jones, Q. M. C." It is better to leave it blank

however, as it can be stamped in correctly by the paymaster's clerk.

565. (3) In column 1, page 2, headed "Names present and absent and rank."

(a) On the 1st line enter the highest rank, as: "Captain."

Enter on the 2nd line the name of that officer, as: "Louis A. Smith."

(b) On the next line enter the next rank, as "1st Lieutenant."

Enter on the following line the name of that officer, as: "Frank P. Johnson."

(c) On the next line enter the next rank, as: "2nd Lieutenant."

Enter on the following line the name of that officer as above.

(d) On the next line enter the next rank, as: "1st Sergeant."

Enter on the following line the name of this non-commissioned officer, as: "Edgar L. Brown."

(e) On the next line enter "Mess Sergeant."

Enter on the following line the name of this man as, "George Carpenter."

(f) On the next line enter the words "Supply Sergeant."

Enter on the following line the name of the man, as: "Thomas B. Dugan."

(g) On the next line enter the word "Sergeants."

Enter on the following lines the names of the sergeants, Christian names appearing first, names appearing in the order of dates of warrants.

(h) Following the names of the sergeants on the next line enter the word "Corporals."

Enter on the following lines the names of the corporals as under sergeants, Christian names first.

(i) Following the names of the corporals enter the word "Mechanic" and the name of this man, Christian name first.

(j) Following the name of the mechanic enter the word "Cooks" and the names of these men in alphabetical order, Christian names first.

(k) Following the names of the cooks enter the word "Buglers" and on the following lines the names of these men in alphabetical order, Christian names first.

(1) On the line following the name of the last bugler enter the word "Privates 1st Class," and on line following these names enter word "Privates."

Enter on the following lines the names of all privates in alphabetical order, Christian names being placed last, as:

"Adams, John."

"Baker, William."

etc.

Note:—Lance corporals will be carried under the heading Privates. Care will be taken to have all names correctly spelled. The names and the headings follow one another without interval, except when made necessary by the use of two or more lines in the column of remarks after the name.

(4) In column 2 headed "Date of enlistment and of rank of officers" enter the date of each officer's commission in that particular grade or the date of the present enlistment in the case of each enlisted man, and when doing so notice that in every case where this date is not more than 60 days before the date of the encampment, a notation must be made in column 4 (Remarks); hence make a small check mark in column 4 to act as a reminder in such cases. The form for entering the date is "May 21, 1916."

(5) In column 3 headed "No. years service" enter the number of years each officer and enlisted man has served after his name.

566. In column 4 headed "Remarks" enter all remarks that may in any way affect the pay of any member of the organization, quote all authorities which grant special rights to pay usually not granted. See Model Pay Roll Entries.

(a) Former U. S. Army service: "Served 1 Enl. Pvt. Co. G, 10 US Inf."

(b) Former Marine Corps Service; "Served 2 Enl. U S. Marine Corps."

(c) Military school training: "Student Culver M. A. 1906-1909."

If promotion occurs while at encampment, this affects a man's pay and should be noted.

If reduction occurs a notation should be made.

If a man is absent for any number of days, even 1, a notation should be made.

If a man did not attend maneuvers, make a notation to that effect as:

“Absent during the entire encampment.”

or

“Awol, did not attend the encampment.”

Enter in this column notation as to qualification in gunnery, rated positions, etc.

In case of any forfeitures against a man's pay the fact should be noted in this column, as:

“Due U. S. for Ord. (revolver) \$14.68.” If you have such a case you had better see the disbursing officer before the payment begins. Other papers will have to be made out to accompany the roll.

Note:—As many lines as may be necessary to avoid crowding will be used after each name.

567. Columns 5, 6, 7, 8, 9, 10. Leave these alone, the disbursing officer will fill them in and he does not desire you to do so.

568. Read the note under the heading. Only one roll is signed by the members of the organization, unless you receive directions to have another signed for the State. Signatures are made exactly as they appear in the column headed “Name” except the surnames always come last, as “John S. Jones.” Black ink only is used, even for the persons *attached* to the company whose names in the column headed “Name” appear in red ink. Each signature must be made on the same line as that upon which the person's name appears in the column headed “Name.” (That is what the numbers are for, they are the numbers of the lines.)

The roll signed will always be the original in case carbon copies have been made.

The roll will be completed and fastened together before being signed.

When payment is to be made by check, no rolls will be signed. Those who are not to be paid for any reason will not sign the roll. In case signature is made it will be erased. In case an officer or soldier whose name is on the roll does not sign, a line (preferably red ink) will be drawn through the space intended for his signature.

569. In case some member of the organization cannot sign his name, his name will be signed for him in the proper place in the following manner “John S. Jones ^{his} X ”; the man in question makes the mark “X” between the words “his” and “mark,” and the organization commander signs his name and rank on the same line as a witness to the fact that Pvt. Jones made the mark “X.”

570. *Certificate in upper left hand corner of the front of the roll, page 1.*

Fill in the date on which the organization left home station and the place at which the encampment is held. In case of a State camp of instruction erase the words “with troops of the Regular Army at.”

The next line is for the signature of the organization commander, as: “Richard C. Wells.”

On the next line enter the rank of the person signing the roll, as: “Captain 1st Inf., Pa. N. G.”

571. Leave the *next certificate* blank. It is for the Regular Army Officer mustering the organization. He will have it filled in.

572. *Certificate in upper right hand corner of page 1 of the original roll, which bears signatures of officers and men.* On the blank lines the organization commander will sign his name and rank after witnessing the payment. See par. 570.

573. *Second certificate on right hand side of page 1.* After payment has been witnessed and original roll signed as stated in par. 572 the organization commander should sign his name and rank on the blank lines of this certificate on the *copies* of the original roll.

574. *Certificate at the bottom of page 1.*

After verifying the entries in the body of the roll the organization commander will sign his name on the first blank line and his rank on the next blank line. The remainder of the certificate will be left blank. It is for the use of the disbursing officer and will be filled in by him.

CHAPTER XIV

U. S. ARMY BLANK FORMS

How to Make Out Regular Army Blank Forms

575. Remarks:

The forms hereinafter mentioned are those used by the Regular Army and are the ones that you will be most liable to have to contend with in the military service.

For Pay Rolls see Chapter XIV, par. 638.

576. Field Return:

(a) Remarks:

On establishing camp and again on breaking camp, all separate organizations are required to render a Field Return and should provide themselves ahead of time with the necessary blank (Form 26 A. G. O. U. S. Army). Each organization of a regiment makes a Field Return to the headquarters of the regiment; regimental headquarters consolidates and submits a Consolidated* Field Return for the regiment; separate organizations, such as a single battery of artillery, submit their own return.

(b) To make out the form:

After the words "Field Return of" enter the designation of the organization, as

10th Infantry.

or, Field Hospital, No. 1, N. Y. N. G.

After "Commanded by" enter the name and rank of the Commanding Officer, as Colonel H. B. Green, 10th Infantry,

After "for" enter the date, as

August 21, 1915.

In column headed "Station" enter the station or place of encampment. If this place is not the same for all organizations shown on the return, be sure to give the station of each organization, as:

Orange, Conn.

or, Jones' Farm, 1/2 mile east of Orange, Conn., R. F. D. No. 1.

In column headed "Commanding Officer" give the name and rank of each company commander (if the return is a

consolidated one) or, generally speaking, the name and rank of the commander of each unit, as:

Captain I. L. Burns, 10th Infantry.

In the column headed "Troops," give the designation of each unit composing the organization which is rendering the return, using a separate line for each of these units. Give them in alphabetical order, as:

Co. A, 10th Infantry.

Co. B, 10th Infantry.

Do not use ditto marks. Remember to include the Field and Staff Officers, all companies, and infirmary if any.

Column headed "Number of regiments," not used except when this blank is used for organizations larger than a regiment.

Column headed "Number of companies," enter after each company the figure 1 and total these near the bottom of the blank in the space under the black line.

Column headed "Present":

"Officers":

(1) "For duty" enter the number of officers *for duty* in each of the companies and on a line with that company. This includes attached officers. Total below the black line.

(2) "On special duty" enter as given above "For duty," but bear in mind that an officer or enlisted man is on special duty only when so detailed *by order*.

(3) "Sick" enter as explained for "For duty." An officer or enlisted man cannot be carried "sick" and "for duty" at the same time, and is carried on this return as "sick" only when so marked on the sick book by the surgeon.

(4) "In arrest" enter as explained for "For duty." If in arrest, the officer or enlisted man is not for duty.

(5) "Total" enter the total of all the preceding headings just named for that particular company, and see that this total agrees with the actual total below the black line.

"Enlisted men":

(a) Proceed as above explained for "Officers."

(b) Column headed "Absent":

“Within the Department,” consider your organization as in the department station.

“Officers” enter as before explained, the number of officers *absent* from each company and total below the black line.

“Enlisted men” same as for officers.

“Without the Department,” enter those absent from Dept. Column headed “Aggregate, Present and Absent” enter on the line for each company, the aggregate, which is the sum of the totals of officers present and absent, and of the enlisted men present and absent. The number shown in this column should be identical with the total number of officers and enlisted men (present and absent) belonging to that company and shown on the rolls. Total below the black line.

Column headed “For duty equipped”:

(a) “Officers.” Enter the number of officers who are equipped and present for duty: in other words, those who are available for field service.

(b) “Enlisted men.” Same as for (a). Total below the black line.

Column headed “Memoranda”:

(a) Neglect the first 4 columns.

(b) “Horses”:

(1) “Serviceable.” Enter the number of horses each organization has that are fit for duty.

(2) “Unserviceable.” Enter the number of injured, sick, or otherwise unserviceable horses.

(3) “Lost in action, died, etc.” If a horse dies scratch out “lost in action” and leave the word “died” and enter the number of horses that have died. Total below the black line.

Column headed “Pieces of Artillery”:

Enter as explained for preceding columns.

For a Machine Gun Company, write in the third space (the blank space) “Machine Guns” and enter the number of guns.

Line “Total”:

See that all spaces below the black line are filled out and correct.

Dotted line above the word "Adjutant" for the signature of the Regimental (or other) Adjutant, as—H. C. Carter.

Line "Adjutant" enter the rank of the adjutant, as—Captain 71st Infantry.

Line "Station" enter the station or place of encampment (post-office address also) of the *headquarters* of the organization submitting this return, as—Jones' Farm, near Orange, Conn. R. F. D. No. 1.

Line "Date," give date return as submitted, as—August 21, 1915.

Line above "Commanding" is for the signature of the commanding officer of the organization which submits the return.

Line "Commanding" for the rank of the commanding officer, as—Colonel 71st Infantry.

Note: If the return is submitted by a separate company this would be the place for the company commander's signature and rank.

Reverse side of blank:

The "brief." Under the words "Field Return of" enter the designation of the organization, which should be the same as that given on the top line on the other side of the blank. Under "for" enter the date.

Columns headed "Officers present, etc.":

Note: Enter herein the name, rank, corps, of each and every officer that belongs to the organization or is attached to it, whether he be present or absent. Enter the names of all attached officers in *red ink*.

(a) "No." Number the officers consecutively, as—1, 2, 3, 4, etc. This is for the number of officers and not the number of lines, so if the remarks under a certain officer's name require more than one line do not number that officer twice.

(b) "Names." Enter according to rank, the names of all officers belonging to the organization, as—Brown, Leroy C. Attached officers are entered in *red ink* in their proper place according to rank.

(c) "Rank." Enter the rank of each officer whose name appears in the preceding column.

(d) "Regiment or Corps." Enter the regiment or corps the officer belongs to, as—10th Infantry.

(e) "Remarks." Enter such necessary remarks as will clearly show the status of each officer, as—
Present for duty.

Absent with leave.

Sick in Field Hospital.

Attached to regiment, per S. O.

Column "Record of Events." Enter herein a complete itinerary of the trip to the encampment and all that has occurred to the organization up to the time the return is submitted, somewhat as follows:

Left station, New Haven, Conn., on July 3, 1915, at 9:10 A. M., via N. Y., N. H. & H. R. R.; lost 1 sergeant by desertion, en route. Arrived at Derby, Conn., 12:20 P. M., July 3, 1915, and detrained. Detraining and unloading completed at 2 P. M. Marched to maneuver camp at Orange, Conn., arriving at camp at 3 P. M. In camp at Orange, Conn., until July 5, the regiment participating in drills and tactical exercises. At 7 A. M., July 6, made a practice march to Jones' Farm, 10 miles west of Orange, Conn., arriving Jones' Farm 11 A. M., etc.

577. Morning Report (company).

(a) Remarks:

Each company, troop, battery and detachment is required to submit daily to headquarters a report of its strength and whatever change of status has occurred concerning any member of the organization. This report is made on Form No. 332 A. G. O. One of these reports is also made for the Field and Staff of a regiment. Form 333 A. G. O. The form consists of two parts, the numerical accounting of the members of the organization, present and absent, and the remarks concerning any change of status of any member.

(b) To make out the form:

Column headed "Days of the Month." If the report is to be opened on the 5th of the month, begin on line 5, not on line 1.

Column headed "Station." Enter the place where the organization is stationed, as—Derby, Conn.

Column headed "C. O., E. M." It will be seen that for any day of the month, as the 1st, there are two lines, one beginning C. O., and the other just below it beginning E. M. C. O. means Company Officers, and E. M. means Enlisted Men: So, in entering the number of captains, lieutenants, sergeants, etc., be sure to enter the *officers* on the line C. O., and the *enlisted men* on the line below it, or on line E. M.

Other columns. Read the headings of the columns and the note at the upper right hand corner of the page, then enter the number of the officers, non-commissioned officers, and privates as indicated. Total these results in the column headed "Present and Absent," totaling the officers separately. In the column headed "Aggregate" enter the sum of the number of officers and enlisted men as shown in the preceding column. Each day's entries are signed by the organization commander in the last column and on a line with that particular day. The rank of the person signing the report should also be given, as—B. F. Jones, Capt. 10th Infantry.

Page headed "Remarks." Use the space for the proper day of the month, as the 5th, if report is opened on that date. Enter in this space *every* change of status of any member of the organization, including those attached. Some of the remarks which are more or less common are as follows:

No change.

Cook Thornton from duty to A. W. O. L.

Pvt. Jones, Co. A Sig. Corps attached for rations.

Pvt. Smith, from duty to sick in field hospital.

Lieut. Johnson, from absent with leave to duty.

Pvt. Wilson, promoted from Pvt. to Corporal.

Sergeant Laire, reduced from Sgt. to Pvt.

Note: See model pay roll entries for proper abbreviations.

Suppose that on the morning of the 5th the report shows the following:

- 1 Captain.
- 1 First Lieutenant.
- 1 Second Lieutenant.
- 1 First Sergeant.
- 1 Supply Sergeant.
- 4 Sergeants.
- 6 Corporals.
- 2 Cooks.
- 32 Privates.

Making a total of 3 C. O. and 46 E. M., or an aggregate of 49 and that during the day, and up to the time the sick book is returned on the 6th, the following occurs in the organization:

- Captain goes sick in field hospital.
- 1 Sergeant is reduced to Private.
- 1 Corporal is promoted to Sergeant.
- 1 Private is promoted to Corporal.
- 1 Private goes absent without leave.
- 1 Corporal and 3 Privates are attached to the organization.

The report of the 6th would show:

- 1 First Lieutenant.
- 1 Second Lieutenant.
- 1 First Sergeant.
- 1 Supply Sergeant.
- 4 Sergeants (1 was reduced but another appointed to take his place).
- 6 Corporals (1 was promoted but a Private was promoted to Corp.).
- 1 Corporal shown in red ink. (Attached men shown in red ink.)
- 2 Cooks.
- 31 Privates (1 promoted to Corporal, 1 lost by Awol 1 gained by reduction of Sgt.).
- 3 Privates shown in red ink. (Attached men shown in red ink.)

In the column headed "Sick" and on a line with C. O., enter 1 (the Captain).

In the column headed "Absent," and on a line with E. M., enter 1 (the absent Pvt.).

In the "Present and Absent" column total the officers and enlisted men and include those marked in red ink, but use only black ink in this column, as—

C. O. 3

E. M. 50

aggregate 53

On page for "Remarks" and in the space for the 6th enter the following remarks:

Capt. Jones fr. duty to sk. in field hospital.

Sgt. Smith reduced fr. Sgt. to Pvt.

Corp. Brown promoted Sgt. fr. Corp.

Pvt. Laire promoted Corp. fr. Pvt.

Pvt. Adams fr. duty to Awol 1 P. M. July 5.

Corp. Allen, Pvts. Blatt, Singles, Scott, 10th Inft. attached 2 P. M. July 5.

When signed by the company commander, the report for that day is complete, except for the additions and deductions in regard to rations.

578. How to Handle Additions and Deductions for Rations:

1st Sergeants should keep track of these additions and deductions.

Suppose rations are drawn on the 5th and they are to be drawn again on the 10th, that is the ration returns are made for the period 5th to 9th inclusive and the companies are to submit another ration return for the period 10th to 14th inclusive.

Any change in the status of the officers will not affect rations, so the Captain going sick makes no change and no deduction.

As 1 private went absent without leave on July 5th, *after* dinner, his rations for the 6th to 9th are still in the organization and the organization is not entitled to them, so 4 rations are deducted in this case. Had he gone *before* dinner the deduction would have been 5, because anything less than 2 meals is not counted as a ration. When he comes back the number of rations that it takes to feed him for the remaining part of that ration period are taken up, or added. Suppose he comes back at 10 A. M. on the 7th. He then has 2 meals on the 7th and rations on the 8th and 9th inclusive, 3 rations are *added*.

As 1 corporal and 3 privates were attached *after dinner* on the 5th, the organization is short 4×5 or 20 rations for them, and these rations are additions which are due the organization on its next return, July 10th.

During a ration period, the organization will at times be short and at other times be ahead; and when the next return is submitted, July 10th, a balance is struck between these additions and deductions to see whether the organization owes the commissary, or vice versa. In the former case the organization is entitled to that number *less* on its next return and this number is deducted from the total number due as explained in making out the return. In the other case an addition is made to the number allowed the organization as explained for making out the ration return.

It is not hard to handle these additions and deductions and a little practice will enable the First Sergeant to do this easily and correctly. If an enlisted man is separated from his organization by order, or if he goes absent, he is not there to eat his rations and procures them elsewhere, consequently his organization is not entitled to them and they must be deducted. When men join they must be fed, and the organization is entitled to draw rations from the commissary for these extra men.

Two meals are counted as 1 ration, 1 meal is neglected altogether. Rations are not carried by fractions.

The explanation in the front of the form will show how these additions and deductions are carried each day on the "Remarks" page.

579. Requisition for Forage.

(a) Remarks:

This form is Form 38a Q. M. C.

For regiments, battalions, etc., this form should be made out, prior to date of desired issue, by the Regimental or Battalion Adjutant, and should include all organizations of the command.

For separate troops, batteries, mounted companies or detachments, the form should be made out by such troop, battery, company or detachment commander.

After being made out, it is submitted to the Camp Commanding Officer for approval, and when approved, is sent to the Camp Quartermaster for issue.

The form should be made out before arrival at the maneuver camp, if possible.

(b) To make out the form:

Line "During the month." Enter the month, as—August 2, 1918.

Line "At." Enter the place of the encampment, as—Orange, Conn.

Column "To whom or for what purpose required." Enter the organizations in column, one line to each, as—

Troop A 1st Cav.

Troop B 1st Cav.

Column "Days (No.)." Enter the number of days of encampment, or for which forage is to be drawn, as—10.

Complete the other columns according to their headings, taking the data from the morning report. The word "Subalterns" means "Lientenants." If the officers own their own horses, these should be entered under the heading "Private Horses"; if not, include all horses as "Public Horses." Neglect columns headed "Barley," "Bran," and "Corn," and "Straw for bedding," and enter in the column headed "Oats," the total grain allowance for all animals for the total number of days requisitioned for, bearing in mind that each horse is allowed 12 pounds of grain and each mule 9 pounds per day. If oats are not issued fill in the proper column after ascertaining the kind of grain and the allowance for each animal per day.

In the column headed "Hay," enter the total hay allowance for all animals for the full period, bearing in mind that each animal is allowed 14 pounds of hay each day.

Neglect "Mineral Oil" and "Lights."

At the bottom of the page above the word "Quartermaster" will be seen two dotted lines. The first of these two lines is for the signature of the commander of the organization submitting the requisition (the Colonel, if for a regiment, or the Captain, if for a separate company, troop, or battery). The second dotted line is for the rank of the organization commander, as—Colonel, 10th Inft.

The dotted line in front of the word "Commanding" is for the signature of the Camp Commander. Leave this blank.

Brief. After the words "Required by," on the dotted

lines, enter the organization, as—1st Cavalry.

Leave the rest of the brief blank.

580. Duty Roster:

Organizations should keep a duty roster, even for a short encampment, although very few of them do so. By keeping this roster the First Sergeant is enabled to know at any time whether men have done their share of the necessary camp duties. This roster is not hard to keep and organization commanders should see that their officers and non-commissioned officers learn how to make it out.

The form is Form No. 342 A. G. O., and the explanations and sample roster printed on the first double leaf of each form are considered to be sufficiently plain, and require no further explanation in this manual. If the sample form is carefully studied it can be easily understood.

581. Sick Report:

(a) Remarks:

Form No. 339 A. G. O. is used for all organizations and detachments.

Read the instructions on the form.

This report accompanies a sick soldier each time that soldier is sent to the surgeon for treatment, either at sick call, or at any other time.

(b) How made out:

Column "Date." Enter the date, as—Aug. 4/15.

Column "Surname, Christian Name." Enter the sick soldier's name, as—

King, Joseph A.

Column "Rank." Enter his rank, as—Pvt.

Column "When taken sick." Enter the date he was first placed on sick report with the particular sickness for which he is being treated; that is if he goes on sick report on Aug. 1, enter 8/1/15 in this column each day thereafter as long as he is being marked sick in hospital or quarters.

Column "In line of duty." Enter Yes, No, or (?), as the case may be.

Leave the rest of the report blank.

The organization commander signs the report in the column "Surname" and on the next line below the list of sick

names. The rank of the commander of the organization must be given, as—

B. C. Jones, Capt. 10th Inft.

Brief: After "Of." Enter the name of the organization.

After "From." Enter the date the report is opened.

After "To." Enter the date the report is closed, that is, all filled up.

(c) It is very necessary that this report be properly kept as it is a record that may be required in the future when a man makes a claim for injuries or sickness acquired during an encampment. See that all men who are sick in your organization have their names placed on the report and send them to the surgeon for treatment.

582. All records such as pay rolls, morning reports, duty rosters, sick reports, copies of field returns, etc., should be kept in the organization for future reference. For keeping reports in good condition when in the field some sort of binder is recommended, an envelope is better than nothing at all.

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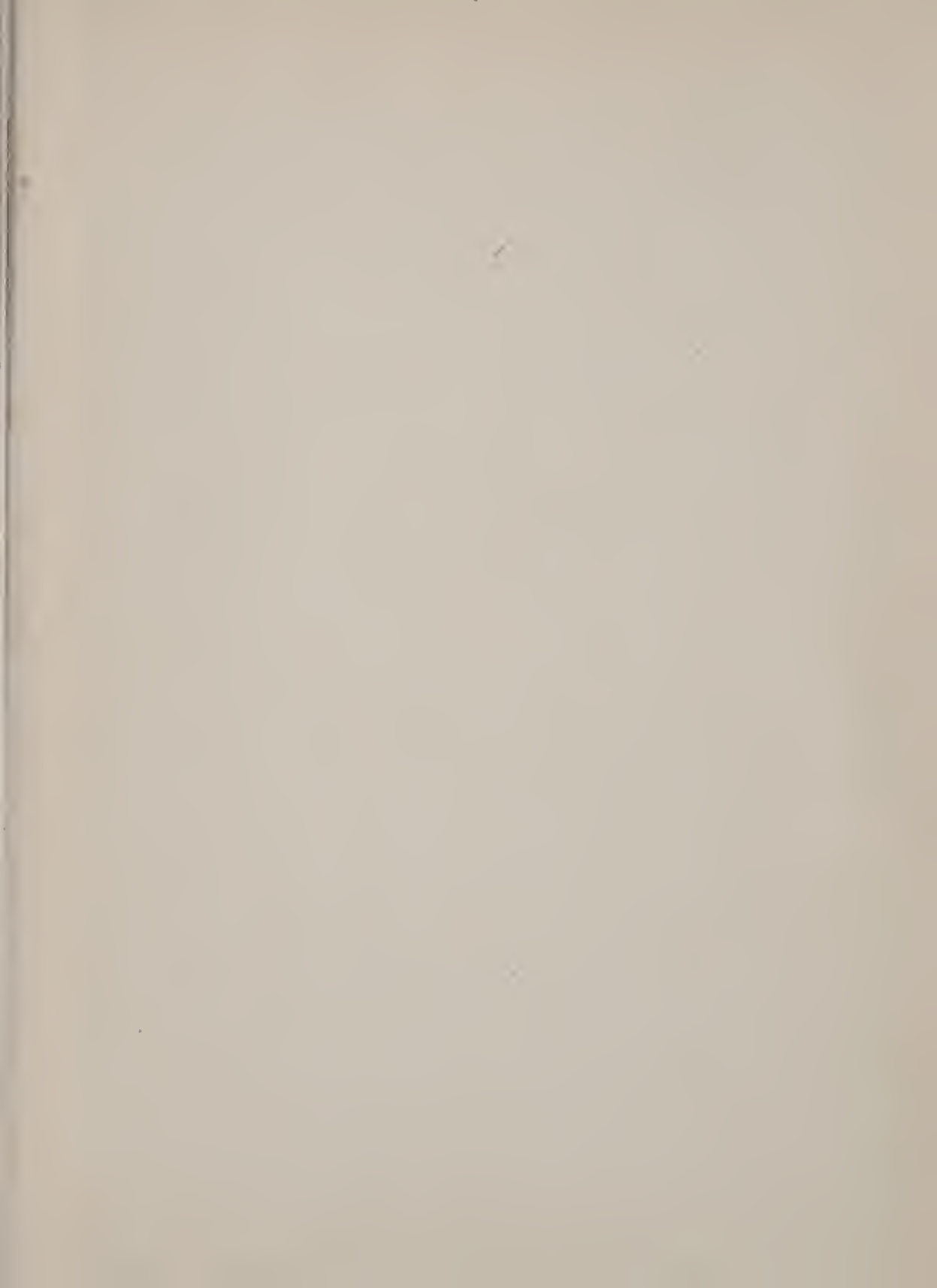
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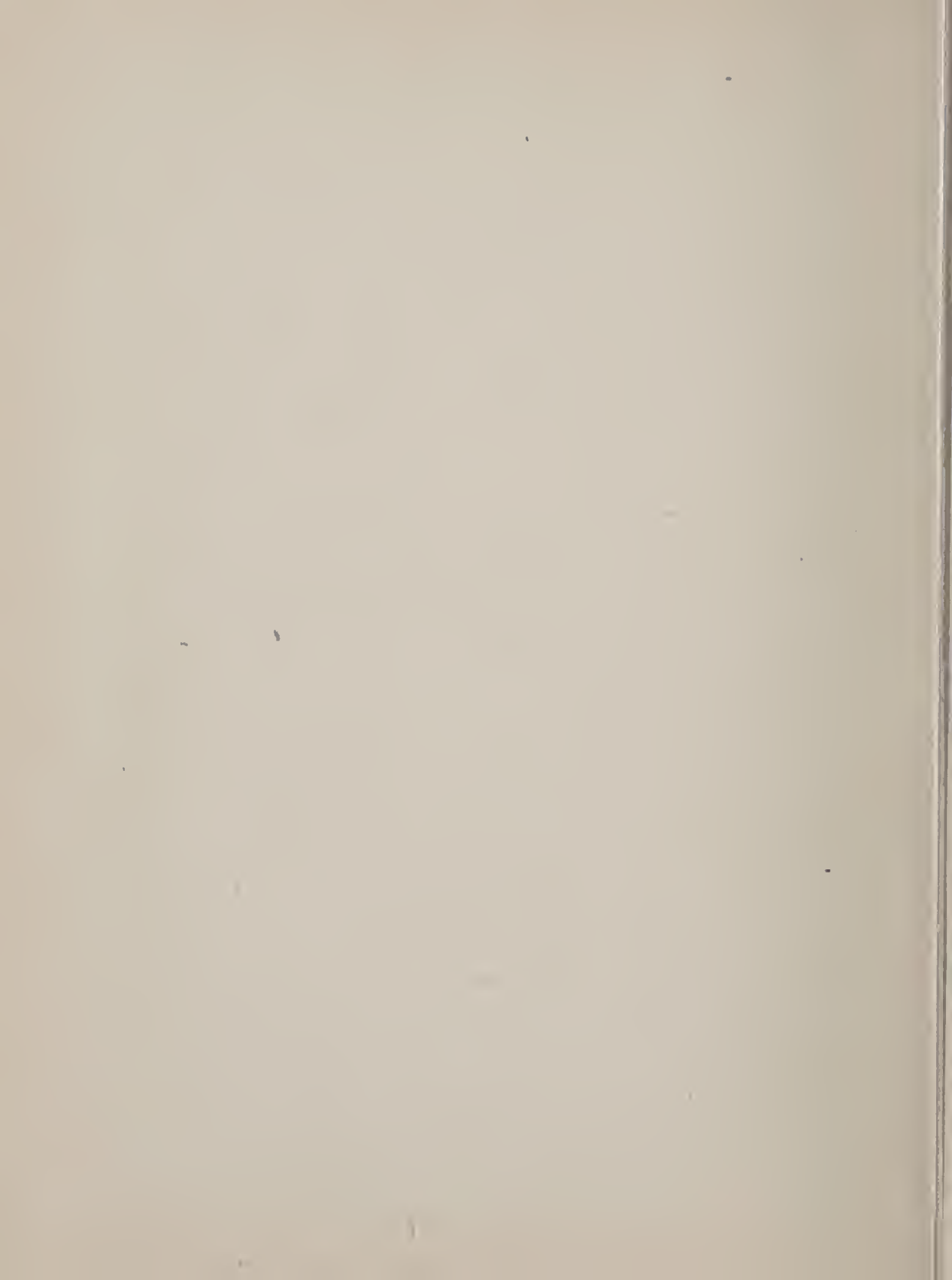
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